

# PHILADELPHIA MEDICAL TIMES.

PHILADELPHIA, FEBRUARY 6, 1886.

## ORIGINAL LECTURES.

### CLINICAL LECTURE.

HOSPITAL COLLEGE OF MEDICINE,  
LOUISVILLE, KENTUCKY.

SERVICE OF DUDLEY S. REYNOLDS, M.D.,  
Professor of General Pathology, Hygiene, and Diseases  
of the Eye and Ear.

Reported by ALLEN KELCH, M.D.

#### CASES ILLUSTRATING DEFECTS OF REFRACTION, WITH REMARKS.

MRS. C., æt. 38, has worn glasses fourteen years. She has never been able to see fine type, she says. She considers herself blind in the left eye, being able to see light only. She cannot tell a man from a woman at any distance with this eye. She has frequent attacks of harassing sick-headache, lasting for several days at a time. She is often nauseated and made sick by attempts to read or to sew. She cannot go in the street without glasses. Suspending her accommodation with homatropine, the glasses she wears enable her to read  $\frac{20}{LXX}$  with the right eye and nothing with the left. After careful testing of the right, it was found that she could see in meridian  $105^\circ$  with  $+\frac{1}{80}$ ,  $\frac{20}{XX}$ . Revolving the disk to  $15^\circ$ , she still saw  $\frac{20}{XX}$ . Removing the stenopaic disk,  $+\frac{1}{80}$ s allowed the patient to see  $\frac{20}{LXX}$  only. Going over this several times without obtaining a different result, I placed two cylinders, each  $+\frac{1}{80}$ , with their axes at right angles before the eye, and instantly the patient saw  $\frac{20}{XX}$ . This, so far as I know, is the first symmetrically quadratic eye which has been fully corrected.

Testing the left eye, I was able to develop  $\frac{20}{L}$  with  $+\frac{1}{4}$  cylindrical axis  $95^\circ$ , combined with  $+\frac{1}{2}$  spherical. Considering that this eye had never before been able to distinguish objects, not even to recognize the difference between a man and a woman at arm's length, I regard this result as being quite remarkable. The lady is quite intelligent, and is the wife of one of our most prominent ministers. The correcting-lenses being constructed after the formulæ above stated, the patient is now able to read the smallest type and to see

all ordinary objects, and, in fact, enjoys not only normal acuity of vision, but perfect comfort in the use of her eyes.

This case is presented for the purpose of directing your minds to the consideration of defects of refraction in the eye. She had been to see a number of the most prominent specialists in the country, each of whom prescribed glasses. I took the pains to measure the glasses which she said suited her best, and which she had long worn, and I found the one for the right eye compounded as follows:  $+\frac{1}{4}$ c axis  $75^\circ$ , combined with  $+\frac{1}{8}$ c. In the left eye she had  $+\frac{1}{8}$ c axis  $100^\circ$ . For what reason this latter glass was prescribed I was not even able to conjecture, as the patient could see no object with it whatever. With the combination just stated she read  $\frac{20}{LXX}$  with the right eye, whereas with two  $+$  cylinders—each of only  $\frac{1}{80}$ —set at right angles, the one at  $105^\circ$  and the other at  $15^\circ$ , she actually saw  $\frac{20}{XX}+$ .

Case II.—The gentleman before you—Mr. S., of Mississippi—wrote me some time ago that he had long been the subject of granular lids, and had been treated by quite a number of physicians in that section of the country, and went on to say that he was able to read for a short time in the day only. He was the subject, on any prolonged attempt at study, of very severe headaches, often confining him to bed, and sometimes to a dark room, for several days at a time. He wished to know the prospect of recovery in case he should come to Louisville. I wrote him that I doubted his having granular lids, but that nothing short of personal examination would enable me to form an intelligent opinion of his case, and advised him to come. He arrived in the city Saturday at noon. When he called at my office, on everting the lids I found hyperæmia,—mere suffusion of the conjunctiva lining the lids, without any evidence whatever of inflammation.

Suspending his accommodation, I found him utterly unable to distinguish any object on the test-card at twenty feet. He is here now at my special request, that you may witness the details of determining the state of his refraction. You observe this instrument, which has two catch-frames, with a sliding arrangement, so as to approach or separate at will. Each of

these catches has three grooves just suited to hold the lenses in Nacet's test-case. The faces of each of these semicircles are graded in degrees from 0 to 180. They represent half-circles revolved to the right. Placing Donders's stenopaic disk in the central groove and revolving it so as to bring the slot directly into the vertical meridian, and placing, as you see,  $+\frac{1}{2}$  in the outer groove from the patient's eye, he sees  $\frac{20}{XX}$ . Revolving the disk to 180°, he is not able to see any character on the card. By experiment, you observe that with  $-\frac{1}{2}$  he reads  $\frac{20}{XX}$  in this meridian. Now, how shall we construct a spectacle-lens which shall represent the combined powers of these two lenses? The answer is simple. Of course the piece of glass out of which the lens is to be made has two surfaces, and we shall have one of these ground to represent  $+\frac{1}{2}$  axis 180°, and the other at right angles to represent  $-\frac{1}{2}$ . Thus the combination is completed. Fortunately for Mr. S., you observe, the left eye is precisely like the right in its abnormal refraction. The next step is to determine the distance between the pupils and the height of the bridge of the nose. He measures two and three-eighths inches from the centre of one pupil to the centre of the other, as he gazes steadily at the bridge of my nose about eighteen inches from his face. Now, if he looks at the wall over my head the distance between his pupils is two and a half inches. This is a very important matter for consideration in ordering compound lenses, or in fact any kind of lens for the purpose of reading and out-door use. In reading the eyes converge, and in gazing at distant objects the eyes permit the lines of vision to lie in parallels. The difference between the adjustment of the eye for distant objects and for near objects is generally about one-eighth of an inch. The glasses for this gentleman for reading should be two and three-eighths inches between the centres, while if he wears them for out-door use they are likely to fatigue the eyes unless he has another pair set in frames two and a half inches between centres. There is nothing peculiar about the bridge of his nose. The ordinary curve found in oval spectacle-frames, therefore, will answer his purpose. As he has a moderately long neck, and is able to raise the chin and toss the head back with ease and comfort, the

same character of frame which he uses for reading may be worn for distant vision. If the bridge of the nose were very high he would require a deeper curve in the frame for reading than for distant vision, while if it were very low it might be necessary to have no groove in the bridge at all in the frames for distance, while those for reading might drop down to the cheek without touching the nose at all.

There is a serious objection to setting lenses in the pinch-nose frames, because they are seldom adjusted in such a manner as to permit the lenses to lie directly before each eye, that the patient may see through the centre, and because they are never even approximately in the same plane.

It requires a great deal of care to adjust spectacles properly. The eye must see through the centre of the lens, and the lens must occupy a plane at right angles to a line drawn from the centre of the pupil to the surface of the object, and the object itself should lie in a plane parallel to that occupied by the lens and at right angles with the line of vision. The light should always come from above and to one side, or, as it is commonly expressed, over the shoulder. The glasses should be as close to the eye as possible without touching the lash. If for reading, the two glasses should not be in the same plane, but should intersect the line of vision precisely at right angles. This may be accomplished by so bending the bows as to make them press firmly against the sides of the head, causing the bridge of the frame to spring just sufficient to place each lens in the desired position before each eye, whereas, on the other hand, in adjusting glasses to see distant objects the two lenses should occupy the same plane.

If these rules be not observed, any discrepancy in the distance between the centre of the lens and the axis of vision will overtax the muscles of the eye to overcome the prismatic effect of the abnormally adjusted lens; or if the muscles are not able to resist the prismatic effect thus produced, double images appear to harass and annoy the patient. It may seem to be a great deal of trouble to observe all these details in the mere matter of adjusting spectacles; but a careful observation of them will be necessary to secure the best results. It is a matter of some importance in prescribing glasses that you should be

able to obtain the glasses for measurement, and to show the patient the proper methods of adjustment. In a carefully-recorded experience extending through nearly a quarter of a century, I can truthfully say that not one in three hundred will adjust the glasses properly without instruction, and that it is rare indeed that any one, except a well-trained, practical optician, can fill even the simplest order for spectacles correctly. You are to understand that jewellers are not opticians, and that the spectacles peddled about the country, as well as those kept in all notion-stores and jewelry-establishments, are exceedingly unreliable. They are sold by numbers, and it is the rarest thing to find the two lenses in one frame of exactly the same refracting power. It is rare also to find lenses symmetrically ground, and rarer still to find them made of a good quality of glass, which will not become colored on exposure to the light. The proper material for spectacle-lenses is crown glass, and not quartz, or pebble, as it is sometimes called.

#### TREATMENT OF NASAL POLYPI BY INJECTIONS.

*Case III.*—Mr. William M., æt. 28, came here two weeks ago with a peculiar voice, which at once suggested obstruction of the nose. Examination revealed chronic muco-purulent inflammation in the right nostril: the left was completely filled with gelatinoid polyps.

Nasal polypus has long been a part of *opprobria medicorum*. Various kinds of forceps have been invented for the purpose of seizing the tumor and drawing it out bodily. This, of course, could never succeed in removing the entire tumor with its pedicle, yet it always succeeded in doing more or less damage to the previously inflamed portions of the nasal membrane, and even denuding, wounding, or even crushing the turbinated bones. Different kinds of scissors have been devised for cutting off the pedicle, but, as with the negro who was congratulating himself upon the feast of broiled rabbit, the game has not yet been caught.

If the pedicle could be reached with unerring certainty, there could be nothing more simple than to clip it asunder with scissors. Unfortunately, however, the pedicle is seldom in sight.

Different kinds of snares and *écraseurs* have afforded temporary joy to their too enthusiastic inventors, with a modicum of

comfort to the patient. Quite recently I was amused to read an account of a novel method of removing polyps from the nose. The inventor of this new plan treated the subject as though the only object in view in the treatment of such cases was simply the mere expulsion of the polypus. Accordingly, he used an instrument similar to Bellocq's canula, and, placing a quantity of old linen torn into strips in the loop, he drew this mass of old rags up through the posterior nares, when, by making a sudden jerk, he announced that the polypus could be shot out of the nasal passages, much as the wad is expelled from a popgun.

He seemed to regard this as a great achievement in surgery. The sweet simplicity which apparently clustered about the ignorance and the illiteracy of the author of this novel device is, to my mind, in charming contrast to the able adventurer who, with a galvano-cautery, undertakes to clean out turbinated bones, polypi, and all with a simple touch of the electric fire.

To be plain, gentlemen, the treatment of polypus of the nose is a serious matter. It requires much time and patience not merely to remove a polypus, and in that way produce some temporary relief to the patient from the mechanical obstruction to nasal respiration, but to change the nutrition of the membrane upon which these pestiferous growths are developed. Swelling in the nasal membrane, causing close and firm apposition on opposite sides of the crypt, causes accumulation of mucus in the follicles. One or more of these presently dilate, and, once the connective-tissue walls begin to yield, it presently ruptures, and a commingling of mucus and lymph rapidly distends the submucous cellular tissue, until presently a well-defined pedunculated growth is made to project into the previously open space. The nature of the pressure may cause two or more of these growths to develop near the same site, and, unless obliteration of the sac or its complete extirpation be practised, rapid reproduction of the growth must necessarily follow.

Considerable experience with different kinds of caustic or other injecting-fluids thrown into the body of polypoid growths in the nose has gradually led me into the habit of relying almost exclusively upon this means of destruction and removal.

I usually begin, as I did in this case, with

the injection of from one to three minims of liquefied pure carbolic acid, which I throw into the body of the tumor through the hypodermic-syringe needle, made especially long and bent at an angle of twenty-five degrees near the point of attachment to the barrel. This needle is straight from the point back three and a half inches, and is very convenient for the purpose of injecting nasal polyps. I have injected Mr. M.'s polypus in two different places on previous occasions. You now observe that he is able to breathe freely through the left nostril, and exhibits in his voice none of the signs of obstruction which characterized his first appearance here. There are still, however, a few little irregular fringe-like projections from the lower margin of the middle turbinated bone. With some difficulty reflected light may be focused at the point where these bodies are situated, and, as you see, I am now able to inject the liquid carbolic acid without permitting any of it to run down into the pharynx or forward into the nose. While the point of the needle is still within the body of the largest one of these polypoid masses, he says he feels but slight pain, not at all severe, and, by waiting fifteen or twenty seconds after the injection of the fluid, the needle may be slowly and cautiously withdrawn without letting out any of the carbolic acid, and without producing any hemorrhage beyond the slight oozing of bloody serum. The carbolic acid instantly coagulates the contents of the polyp, while the investing membrane is quickly inflamed, and in about forty-eight hours from the time of the injection it is usual for the main part of the injected growth to come away *en masse*, completely sphacelated.

The spray through a glass tube of the saturated ethereal solution of iodoform may in many instances be advantageously employed just after the slough has separated. Where the discharge is very tenacious, the use of tannin dissolved in Listerine is desirable. It may be employed in saturated solution with a mop made of cotton-wool rolled upon the end of a probe, so as to pass readily to the exact spot which it may be desired to touch, or the solution may be diluted with distilled water in any proportion and sprayed into the nose. It coagulates the lymph instantly, and is not followed by any painful irritation. It is especially useful in cases

where the discharge is profuse and there exists a tendency to form such accumulations as would obstruct the passages and shut out the air from the nasal membrane.

It is probable that the injection practised a moment ago will be the last Mr. M. will require. Yet it will be necessary to touch the points where the pedicles grew from the surface of the membrane, at different times, with pure carbolic acid, or, if the tendency to vegetation resists that, a little chromic acid carefully applied, taking care always to touch no other part than that which it is desired to destroy by the caustic.

Some cases of polypus exhibit a tendency to frequent hemorrhages, especially of the remaining pedicle after the body of the polypus has been destroyed by caustic. Injection into the bleeding pedicle of the official compound tincture of iodine, or of iodine in solution, will be followed by rapid shrinking of the vascular mass and permanent relief of the hemorrhagic tendency.

In the case of Mr. M., a powder, compounded according to the following formula,—

R Sodii boratis, ʒj;  
Sodii chloridi, ʒij;  
Cubebæ, gr. v.

M. Ft. pulv.,—

shall be used by the patient as a snuff at intervals sufficiently short to prevent accumulations of matter in the nasal passages. This powder creates no pain or other uncomfortable sensations, and may be freely snuffed up into the nose, drawn back into the pharynx, and hawked out.

## ORIGINAL COMMUNICATIONS.

### FOREIGN BODIES IN THE VITREOUS.\*

BY E. MEIERHOF, M.D.,

Professor of Diseases of the Eye and Ear in the Baltimore Medical College.

F. S., aged 22, sheet-iron worker, was engaged in riveting boiler-plates, when a piece of steel from the button-set used in forming heads on rivets flew off, striking the outer and upper ciliary region about two mm. behind the sclero-corneal margin. I saw the patient about an hour after the accident, and

\* Read before the Clinical Society of Maryland.



the eye presented the following appearances. At the point where the eye was struck, a wound, causing a bit of iris to prolapse in the opening, was seen; the anterior chamber was slightly cloudy, but it was impossible to see much beyond this, as the vitreous was bloody. The patient complained of little or no pain. The eyeball was quite soft, and vision equalled quantitative perception of light. The patient was ordered a one-per-cent. solution of sulph. atropine, and the application of iced pledgets of linen to the external surface of the lids, and to remain at rest in a horizontal position in a darkened room. The next day the eye was improved in its appearance, the night previous having been spent without any pain. The vitreous was slightly clearer; a number of small floating bodies, supposed to be coagulum, indistinctly seen in the vitreous. Vision equalled fingers at four feet. On the fifth day a dark-looking body was seen in the anterior part of the vitreous. The prolapsed iris was reduced, and the eye had lost much of its softness, with the vision  $\frac{1}{20}$ . On the sixth day the dark-looking object had changed to a bright, reflecting, rectangular-shaped piece of metal, apparently five mm. by three mm., the thickness of which it was difficult to estimate, except judging by the knife-like wound made in piercing the sclera. The foreign body was apparently just behind the lens, resting in the lower part of the vitreous. It moved freely when the eyeball was rotated. Vision =  $\frac{2}{20}$ . The retinal vessels could be seen indistinctly in the erect image in outer field only. The lens does not appear to have been displaced or injured. The day following this the foreign body seems to be surrounded with a veil. An operation for the removal of the piece of steel was advised immediately upon discovering it, to which the patient and his friends assented two days afterwards. Upon the tenth day after the infliction of the injury an operation after the following method was performed. A four-per-cent. solution of the hydrochlorate of cocaine was instilled into the conjunctival sac after the regular method. As the position of the foreign body when at rest was on a plane parallel to the iris, it was deemed best to make the scleral incision in such a manner as to produce the least disturbance of the contents of the eye. With the kind assistance of Drs. S. Frank and H. M. Simmons, I made an incision parallel to the edge of the foreign body, on the outer and lower portion of the globe, about four mm. behind the sclero-corneal margin, with a Von Graefe cataract-knife. The incision made was about five mm. in length. The tip of Gruening's permanent magnet was introduced into the opening made, which at once attracted the metallic body to the opening; and upon seizing the body with a pair of fine clot-forceps it was found impossible to draw the chip through without considerable dragging: so it was

deemed advisable to enlarge the incision, which was done with blunt-pointed scissors. The second attempt was again successful in attracting the chip and drawing it easily through the opening. The incision, amounting to about six mm. in length, was closed by means of a deep conjunctival suture, which was sufficient to keep the edges of the wound in approximation. There was comparatively no hemorrhage, but the incision gave rise to considerable pain. Cocaine was of use only in allowing the speculum to remain in position without discomfort, allowing the conjunctiva to be seized, and preventing hemorrhage. The patient was kept in bed, with the resumption of iced pledgets and atropine. At night  $\frac{1}{4}$  grain of morphine was ordered, to insure sleep. The case went on to recovery, so that at the end of three weeks the vision in the injured eye equalled  $\frac{2}{20}$ , or one-half, but the eye has never recovered its normal tension. The piece of steel, as will be seen, is quite large in its dimensions, being about 3 mm. by 5 mm., and weighing 68 mgr., or  $1\frac{1}{10}$  gr.

It is a pity to throw a wet blanket on this brilliant result, but nevertheless it is my duty to state that two months after the operation my patient paid me a visit, complaining of the loss of vision in his injured eye, which upon inspection was found to be due to an almost complete detachment of the retina. He says it followed a drinking-spell one day when he imbibed about a pint of whiskey, which he states did not intoxicate him. There was at the time quantitative perception of light in the outer field. Whether the drinking fostered the retinal lesion it is impossible for me to say, but it is possible the detachment may have been produced by cicatricial changes caused by the injury and that following the operation, besides there being fluid vitreous. I omitted to mention a little experience with the wound. As stated before, a deep conjunctival suture was inserted, which was removed on the third day, as it did not seem to be of any further service; on the fifth day, there being a bead of vitreous which seemed to keep the wound from uniting, I inserted a second suture as before, with the result of having the wound to close two days later.

In June last there appeared one of the most authoritative articles on this most important subject by Professor Hirschberg, of Berlin, who has given us his splendid monograph "On the Electro-Magnet in Eye-Surgery," based on the experience of thirty-two cases of his own, together with

that of all the cases reported up till the issuance of his work. What had been written before on this subject was generally the report of cases by a number of operators; but the experience of Hirschberg is very extensive. His monograph contains so many valuable suggestions that I thought it would not be amiss to mention some.

He says the indications for operating cannot be precisely defined, except that the operation is best done early for the removal of foreign bodies in the eye. If a patient is seen in the first stage, which is within twenty-four hours after the injury, it is best to operate without delay. If the opening lies in the cornea, and especially near its margin, a scleral section is best; and if the opening lies in the sclera at a proper distance from the cornea, the tip of the magnet may be at once introduced, provided the foreign body can be seen in the coagulum or through the cornea, enlarging the scleral section if necessary. If a scleral section is necessary, he advises the patient to be anæsthetized, on account of the great pain caused by the operation, which was the experience in my case. He advises a meridional section (as is usually done) to be made in the lower outer portion of the globe, measuring with a compass a distance of eight mm. from the margin of the cornea, and while an assistant rolls the globe upwards with a pair of strong forceps, plunges a Von Graefe knife several mm. deep into the vitreous at the distance mentioned, for the purpose, as he says, of opening a path to the foreign body through the vitreous, and then finishes the section by enlarging the incision towards the equator of the eye for a distance of six mm. The magnet is then introduced and left inside for a few seconds, and, if the diagnosis is correct, withdrawn with the foreign body attached. The conjunctiva is sutured over the incision and antiseptic dressings applied.

He speaks of the difficulties met in making a diagnosis: the chief one is in discovering the position of the foreign body. The second stage he defines as the stage of irritation, and up to the time when the latter may have increased to circumscribed or diffuse inflammation of the vitreous. The third stage is that when a new inflammation is excited months or years after all previous irritation has ceased, caused by a change in the location of the

foreign body. In the second stage it is advised to operate at once. Regarding the third stage, he mentions a case in which, despite the presence of iron in the eye for sixteen years and a cataract and well-marked irido-cyclitis, the finest type could be read after the removal of the iron with the magnet.

When shall we extract iron through a linear or flap section at the margin of the cornea? (a) When the patient is young, the foreign body not far behind the lens, the cataract mature, and irritation has ceased; (b) when the lens has already been removed, or has been absorbed, and when only a thickened capsule is left behind.

If the foreign body is small and the eye is seen in the first or second stage, and the lens is only partially opaque, the scleral section is preferable; later, we can extract the lens when mature.

If the eye is ruptured for a distance of six to ten millimetres, the globe collapsed or half full of coagulated blood, the magnet performs a genuine surgical triumph in withdrawing a large piece of steel weighing from two hundred to five hundred milligrammes; but vision is not restored. A case is reported in which, despite panophthalmitis, the eye was saved after removal of a piece of iron weighing thirty-one milligrammes, and in another the same result was obtained after removal of a large piece of iron weighing one thousand and fifty milligrammes. As to the form of magnet, it is a well-settled fact that the electro-magnet is the one most useful and reliable: the permanent magnet is of limited utility only, portability being the greatest thing in its favor. There are several forms of electro-magnets which are useful, but Doerffel, of Berlin, makes an apparatus of zinc-carbon elements in a glass jar holding about one litre, the fluid to be renewed from time to time, and the energy tested before each operation, which seems to meet every indication. The apparatus will lift a piece of iron weighing five hundred grammes.

In the long list of extractions from the vitreous, Hirschberg has succeeded twice in obtaining excellent vision, once a remnant of vision, and twice in preserving the shape of the globe,—a great difference in favor of the electro-magnet, when, before its use, he did not succeed in saving a trace of sight when an attempt, either successfully or unsuccessfully, was made to remove

pieces of iron from the vitreous by purely mechanical means.

There is no doubt in my mind that the successes in the operation for removal of foreign bodies from the vitreous are overstated; that is, so far as the permanency of the result is concerned. If we could keep trace of the subsequent histories of cases operated upon, it would be found that the number of successes was diminished on account of later complications, for in the reports of some of the cases some time after the operation, detachment of the retina was reported to have taken place. We have made great strides in the treatment of traumatism of the eyeball and its contents resulting from injuries by foreign bodies, even though useful vision is not always preserved. Yet we should take into consideration the great danger an eye runs when containing a foreign body in its interior. Even though a long period may have elapsed and its action remained dormant, it nevertheless is liable to light up a most serious inflammation, involving not only the injured eye but also its fellow-organ. It is strange that more accidents of this character do not occur, considering the enormous number of people who are daily exposed in pursuing their avocations in the various mechanical arts. Means have been suggested for the prevention of these injuries, but it seems that such suggestions are practically ignored.

#### ARTIFICIAL CLIMATIC EFFECTS FOR "STAY-AT-HOMES."

*Read before the Philadelphia County Medical Society,  
December 9, 1885.*

BY SOLOMON SOLIS-COHEN, A.M., M.D.,  
Chief of Clinic, Out-Patient Medical Department, Jefferson  
Medical College Hospital.

THE benefit to be derived by consumptives from prolonged residence or temporary sojourn in localities where the climatic conditions are favorable is a matter of every-day observation. Not all, however, of the army of sufferers—an army whose death-roll in the city of Philadelphia is more than one-fourth of all the adult deaths—are able to avail themselves of a change of climate. What can we do for those, the vast majority, whose domestic ties, business interests, or lack of means preclude the possibility of leaving home?

Granted that the atmosphere of Florida, or Colorado, or the Adirondacks, or California, possesses health-restoring properties, would it not be desirable if we could so modify the atmosphere in which our patients live as to bring, as it were, Colorado or Florida or the Adirondacks to their dwellings? Or would it not be still more desirable if we could combine the most beneficial qualities of different climates, and so adjust them to the individuality of each case as to give the stay-at-home the benefits of Colorado, Florida, and California at one time, and in the midst of his family? The answer to these questions is an emphatic affirmative. Can we do this? To the latter question our affirmative must be qualified. We cannot accomplish all that we may desire: still, we can accomplish much. We cannot, of course, change out-of-door conditions. We cannot cause the sun to shine when forces, often beyond our ken and always beyond our control, have wrought it otherwise. We are as powerless to divert the course of the storm-cloud as King Knut to stay the sea. Therefore, we cannot send our patients out into the open air continuously,—a highly-appreciated advantage of certain climates, both warm and cold. Neither can we have our patients stay at home and receive the benefits conferred by change of scene, rest from ordinary avocations, freedom from annoying surroundings, and the other collateral advantages which going from home affords. But we can, by artificial changes of atmospheric pressure about our patients, or by modifications of the pressure of the air breathed by them, and the impregnation of the respired air with certain volatile medicaments, produce effects which approximate more or less closely some of the effects produced by residence in elevated regions at low barometric pressure, or at the sea-shore, or in pine regions, or among any of the other atmospheric qualities which may be considered beneficial in particular instances. While we cannot by these measures, which must be conducted intermittently and in-doors, rival a continuous life in the desired atmosphere with the concomitant benefits of out-door exercise, yet in certain cases we can more than compensate for this defect by the accuracy with which we can fit the properties of our artificial atmosphere to the requirements of the case in hand, by the ease with which

we can combine different desirable qualities not always found combined in nature, by comparative independence of the meteorological variations from which even the most favored climate is not exempt, and by our power to produce certain local effects to which climate alone is inadequate. And in all cases where going from home is out of the question, it certainly seems our duty to do what we can towards affording a modicum of that relief whose entirety is denied by circumstances.

The means at our disposal for the production of these artificial climatic effects are the compressed air-bath or rarefied air-bath; the intermittent inhalation of compressed air, or of rarefied air, or of ozone, oxygen, nitrogen, or nitrous oxide, or of a mixture of these gases with each other or with air; and the continuous inhalation of balsamic or antiseptic vapors, such as terebene, eucalyptol, benzoin, creasote, thymol, iodine, and their congeners. The air-bath, whether compressed or rarefied air be the medium in which our patient is immersed, whether the classical cabinet of Tabarie or some of the more recent modifications thereof be the device employed, necessitates the construction of a costly apparatus, and consequently cannot well be employed except at an institution specially devoted to such purposes. I shall not, therefore, dwell upon this or any other of the expensive plans for accomplishing similar ends, but shall present only methods to which every physician can readily resort.

Hauke, in 1870, constructed the first portable apparatus for the administration of compressed air by inhalation, and since his time many others have devised apparatus for the same purpose, the best of which is probably that of Waldenburg, modelled after the spirometer of Hutchinson. It consists of two cylinders, one of which, inverted, slides within the other, its motion being controlled by weights and pulleys,—in fact, the ordinary gasometer. The outer cylinder being filled with water, the air within the inner cylinder can be compressed by means of weights placed on top of it, or rarefied by means of weights suspended from the pulleys. Various attachments, gauges, scales, etc., permit of accurate clinical and physiological application and observation. Waldenburg's machine or Schnitzler's modification of it is expensive, is difficult to obtain on this side of the Atlantic, and is too cumbersome

to be transported to and from a patient's house. Setting aside expense, for office use I do not think it can be improved upon. The little apparatus I have here (Fig. 1),

FIG. 1.



Cohen's compressed-air apparatus.

and which I explained in detail to the Society last year, is the outcome of a series of personal experiments\* with many different devices. It is practically a Waldenburg apparatus cut down in size and in price. The original features consist of the manner in which the inner cylinder is weighted, and the manner in which the air is introduced. Instead of sucking the air into the inner cylinder by lifting the cylinder with weights, we pump it in from a foot-bellows. The equilibrium of the inner cylinder, which has neither flanges nor pulleys, is maintained by two weights placed upon shelves at the bottom (Fig. 2).

For detailed description and illustration, I would refer to last year's Transactions of this Society. This apparatus can be used only for administering inhalations of compressed air. It is not available if rarefied air be desired. I have had one of these machines in constant office use for more than two years, and find it perfectly satisfactory. Some few have been purchased for home use by patients residing out of town, and, as I have heard no complaints, I presume that they answer the purpose. The patient should stand, if able, while inhaling, with the head thrown

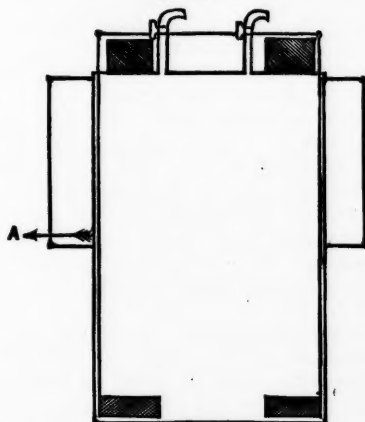
\* I am indebted to Mr. Charles Richardson, of Queen & Co., for valuable assistance.



up and the shoulders drawn back. Sometimes it is advisable for the physician to

respirator, and a few ounces of terebene, creasote, eucalyptol, ethyl iodide, tinc-

FIG. 2.



Section showing the manner of weighting. At the level of arrow A there is a row of perforations, to permit the escape into the overflow-tank of the water displaced by pressure.

gently press the shoulders backward or forward in harmony with the acts of respiration. From fifteen to thirty, or even forty, respirations can be taken continuously, after which there should be a rest of at least ten minutes before repeating the process. Two or three sets of respirations are enough for one visit. One or two visits a day are usually sufficient. The pressure employed varies from one-eightieth of an atmosphere (additional) to one-thirtieth of an atmosphere, the average being one-sixtieth of an atmosphere.

If desired to medicate the air, we pass it, as I show here, through a Wolff bottle, in which is placed, in addition to water, a drachm or two of the medicament desired,—in this case terebene. The little perforated zinc respirator\* (Fig. 3) which I exhibit is essentially the same as that devised by Dr. Burney Yeo, of London, probably the best that has ever been offered to the profession. The sponge which is secured in front is saturated or impregnated with the desired solution, and the patient wears the apparatus for a number of hours continuously, at such intervals as convenience or necessity may dictate. With this modified Waldenburg, a Wolff bottle, a Yeo

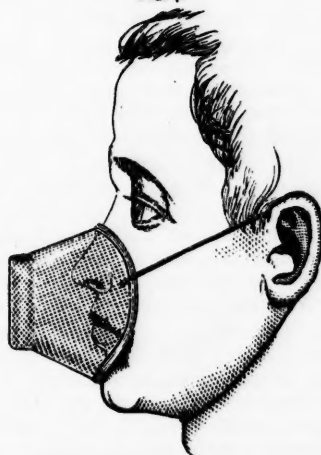
FIG. 3.



Perforated zinc respirator of Yeo (modified).

ture of benzoin, and spirits of chloroform, we can—not in all cases, but in many—

FIG. 4.



The respirator applied.

\* As manufactured by Mr. Louis Genois, pharmacist, of this city, the respirator is slightly modified, according to a suggestion of Dr. J. Solis-Cohen, from Dr. Yeo's original pattern.

give our patients a very satisfactory substitute for the pneumatic effects of change of climate. Add to this armamentarium a

reservoir of oxygen gas and one of nitrous oxide, and we have all that can be desired in the way of respiratory therapeutics, in the vast majority of cases. A few words now as to what we can accomplish by some of these various methods.

As the subject of the evening is pulmonary consumption, I shall speak only in relation to that disease, and, as I said before, only of methods easily available.

The inhalation of oxygen gas, as a continuous and sole reliance, has failed in the experience of my preceptor and in my own experience to be of any permanent benefit. Resorted to occasionally, in the course of treatment by compressed air, to overcome temporary depression, or administered daily in connection with compressed air, it does seem to heighten the good effect; and, if we may judge of its action beyond sight by its action upon regions within laryngoscopic inspection, it may be considered to hasten the reparative—*i.e.*, cicatricial—process in softened or ulcerated areas. In the presence of active febrile process, oxygen is contra-indicated.

Inhalations of ozone, theoretically desirable, are highly spoken of by some observers and condemned by others. The reported effects are so contradictory that in the absence of personal experience I can simply allude to the subject.

Inhalations of nitrogen gas are said to diminish febrile action, to have a sedative effect upon an excited heart, to check cough and night-sweats, and to improve nutrition. I cannot as yet speak from personal experience. I have known valuable sedative effects, diminution of fever, and promotion of sleep, as well as temporary relief to irritative cough, to follow inhalation of a mixture of nitrous oxide gas and air.

The inhalation of compressed air distends unused air-cells and forces a proper expansion of the chest upon patients too weak to respire effectively unaided. In this respect it simulates, and indeed surpasses, residence at high mountain altitudes, where the rarefaction of the surrounding atmosphere relieves the pressure upon the thorax and permits expansion with less muscular effort. If at the same time that the patient inspire compressed air he is allowed to expire into rarefied air, the lungs can be better emptied, through relief from backward pressure, and subsequent inspirations are thus rendered deeper, the in-

terchange of gases being at the same time greatly facilitated. In this way, the complementary air of inspiration being increased in quantity, and becoming, in fact, the tidal air, a greater amount of blood becomes exposed to an increased quantity of oxygen under pressure, the most favorable condition for absorption of oxygen by the hæmoglobin, and exhalation of carbonic acid is hastened. Thus depuration is favored and nutrition is increased. Regions of pulmonary tissue which have long been inactive are again brought into use, and healthy areas are stimulated to energetic function. Pent-up secretions, often decomposing, are stirred up, and finally expelled, reopening occluded lobules to the entrance of respiratory pabulum, and relieving the economy from the deleterious effects of the presence within an important viscus of effete and putrefying materials. The entire respiratory tract is subjected to a purifying and vivifying bath, and the muscular apparatus of the thorax undergoes a systematic gymnastic exercise. The effect upon the circulatory system of the modification of intra-thoracic pressure and the stimulation of intra-pulmonary capillary activity is to relieve tension and increase tonicity, steadying and strengthening the heart, which sends through both pulmonic and aortic systems an increased quantity of blood with lessened effort. These respiratory and circulatory effects reacting upon each other and upon nutrition in general, the ultimate result is an increase in vital capacity of the lungs often astonishing,—the clearing up of congested and occluded pulmonary areas, with in many cases absorption of inflammatory products,—and an increased power of both primary and secondary assimilation, as manifested by gain in strength and in flesh. The increased digestive powers permit us to resort with still further benefit to a system of hyper-alimentation by means of prepared foods, such as Reed and Carnrick's "beef peptonoids," or Favrot's, or Parke, Davis & Co.'s "powdered beef," the first-mentioned preparation being the best that I have come across for the purpose; and, what is a very important matter, the patient is able to ingest this increased food voluntarily, doing away with the necessity for resort to the tube of Debove, a method to which patients manifest repugnance, and in some cases unconquerable disgust, undoubtedly

beneficial though it be. I have tried forced feeding by means of the tube in two or three cases, but have been compelled to abandon it; while by the use of condensed aliments in connection with compressed air I have seen results as astonishing and as permanent as any reported to follow forced feeding. These condensed and predigested foods are to be taken in addition to the ordinary meals of the patient, the latter being properly regulated as to quantity and quality.

If at the same time that we force open the pulmonary alveoli and distend the lungs to their full capacity we impregnate the inspired air with some suitable vapor, we accomplish both systemic and local medication. The agent chosen should not be too irritating, and should be one which, either from empirical or physiological considerations, is known to be of benefit. Pine regions have long enjoyed favorable repute as resorts for consumptives, and the peculiar quality of the atmosphere of these regions can be very closely imitated by the employment of terebinthinate vapors, especially terebene, a derivative of turpentine. From some recent observations of Dr. J. Solis-Cohen, if the inhalation of terebene be followed by that of a moderate quantity of oxygen\* the effect seems to be still more accurately reproduced. Possibly ozone would be better. The compressed air, or the oxygen, can ordinarily be employed only once or twice a day. The inhalation of terebene, however, can be continued indefinitely by means of the Yeo respirator, five or ten drops being placed upon the sponge, advantageously mixed with an equal quantity of spirits of chloroform. Terebene is somewhat irritating, but the chloroform modifies this quality. Another method of accomplishing continuous inhalation is to evaporate terebene or turpentine in the living-room of the patient, either from the surface of steaming water contained in a suitable vessel, or by means of some of the more elaborate apparatus which have been devised for this and similar purposes. The advantage of the respirator is that the patient need not be confined to one room. It can also, if the patient be bold enough, be worn in the street. Bold patients are rare.

\* The oxygen may, if desired, be passed through a wash-bottle containing a small quantity of terebene, similarly to the compressed air.

Other drugs having the pine-wood effect are tincture of benzoin, oil of pine, oil of fir, and eucalyptol. These may be used in various combinations. Creasote is another drug of very great utility. Iodine and ethyl iodide are also of benefit in some cases, but these latter agents, despite the traces of iodine in maritime atmospheres, belong rather to the list of medicinal than to that of climatoid inhalations, and it is not of the medicinal treatment that I now desire to speak,—it being understood that, whether we send our patient from home in search of a suitable atmosphere or endeavor to bring that atmosphere to him, dietetic, hygienic, and medicinal measures should be instituted *secundum artem*.

### THREE CASES OF REMOVAL OF THE OVARIES AND FALLOPIAN TUBES (TAIT'S OPERATION).

Read before the College of Physicians of Philadelphia, November 4, 1885.

BY W. W. KEEN, M.D.,

Professor of Surgery, Woman's Medical College of Pennsylvania, and Senior Surgeon to St. Mary's Hospital, Philadelphia.

THE following cases are put upon record as a contribution to an important operation, the usefulness of which is assured in certain cases, but the limitations of which have not yet been perfectly well defined.

*Case I.—Uterine Myoma; Excessive Hemorrhage and Anæmia; Tait's Operation; Recovery and Cure.*—Mrs. L., of New Jersey, æt. 42; married at twenty-eight; two children, the last born ten years ago; each eleven pounds; normal labors; no miscarriages; absolutely well and strong till three years ago, when her periods became gradually more prolonged and profuse. Now she is unwell three weeks out of every four, and the flow is often so severe as to saturate a napkin every fifteen minutes, besides large clots of blood. She is thoroughly blanched, weak, and anæmic.

November 25, 1881. Sent to me for consultation by Dr. Hollingshead. A tumor is visible in the hypogastrium the moment she lies down and the abdomen is exposed; sound enters six and one-fourth inches. The tumor is an interstitial myoma in the posterior wall, as large as a large fist, moderately tender and painful; no vegetations on the endometrium; no erosion of os; cervix not involved; uterus movable. Advised Squibb's extract of ergot (Mxxx- $\text{xl}$ ), hypodermically, daily into the abdominal wall for a month; if not

then better, advised Tait's operation, as all other means had been previously tried by her attending physician. She was unwell at the end of November, when the ergot was first used. It gave rise to great pain and considerable local inflammation, with nausea and vomiting, and had to be discontinued.

December. Again unwell; the intermenstrual period was freer from pain; but she was weaker and more blanched, and not able to come to the city; lost a large quantity of blood.

January 26, 1882. Came to the city; was so blanched that, had she closed her eyes and folded her waxy hands, she could easily have been mistaken for a corpse; weight one hundred pounds. Treatment: iron, quinine, milk-punch; food every two hours.

28th. Taken unwell; period lasted till February 2; used twenty-eight napkins, besides passing a number of large clots. Bad neuralgia of face; morphia (one-eighth grain) hypodermically failed to relieve, but water similarly given lessened it. Eats but little, on account of pain.

February 3. Dr. R. P. Harris saw her with me, and concurred in advising the operation. Temp. 98.5°; pulse 80, feeble; heart normal, but weak; no change in uterus.

9th. Operation, 12 M.; antiseptic method with carbolic acid, including the spray; bladder emptied. Duration of operation forty-five minutes. Ether (f3viiss) used; incision four inches long, in median line, from pubes half-way to umbilicus; no vessels tied.

On opening the abdomen, a moderate amount of serum escaped. On account of the high position of the uterus, the ovaries were readily found. Each pedicle was transfixed with a double carbolized-silk ligature close to the uterus, the upper including the Fallopian tube, and, after ligature, the tubes and ovaries were removed. The left ovary showed a recent corpus luteum; it had a few small cysts, and was cirrhotic in part. The right had one cyst two inches in diameter, and several smaller ones. The right tube was cystic just at the cervix uteri; it contained a serous fluid. The veins were very large; no bleeding requiring a ligature occurred. The ligatures were all cut off short; four deep and two superficial sutures: the former, including the peritoneum, closed the wound. Dressed with carbolized gauze.

Immediately after the operation her pulse was 120 and feeble. Hot-water bottles were applied, and brandy was used hypodermically several times with good effect. She vomited only once up to 3.30 P.M., when her pulse was 93, temp. 97.2°; very small quantity of food and stimulant every twenty minutes. 7 P.M. Pulse 100, temp. 99.6°; has had some pain; feels stronger. 11 P.M. Temp. 100.8°.

10th. Slept but little, but is comfortable; temp. 100°.

11th. Temp. 98.4°; considerable pain in the back at 9 P.M. last night, followed by a bloody vaginal discharge. In twenty-four hours has used sixteen napkins, moderately saturated. Water at 105°-110° ordered, which gave great relief.

12th. Has used twelve napkins; temp. 98.8°.

13th. Slept excellently; discharge has ceased; dressing changed (fourth day). It was barely soiled with very slight oozing from the operation; no pus; wound free from blush; union by first intention throughout; meat allowed.

15th. Several enemata having had no effect, and as she felt uncomfortable, the rectum was emptied mechanically of a large amount of impacted scybala.

19th. Redressed; wound healed; sutures removed.

22d. Sat up.

25th. The menstrual period was due on the 24th; has used two napkins to date; less than f3ss blood on each.

March 17. Went home; weight one hundred and ten pounds.

24th. Menstruation due; had some back-ache; no blood; stayed abed three days.

June 6. Came to see me; brown as a berry; weight one hundred and thirty pounds; appetite good; strength nearly regained; each month had had slight malaise; no bleeding; uterine cavity three and three-quarter inches; myoma not perceptible, except by bimanual examination.

March, 1884. Rapidly regained full strength; weight has continued at one hundred and forty pounds; no bleeding; sexual appetite unimpaired; tumor entirely gone; uterus three inches.

*Case II.—Severe Nymphomania, leading to Incipient Insanity; Menorrhagia; Tait's Operation; Recovery; Cure.*—Mrs. B., of New Jersey, æt. 42, American; eight children, last born eight years ago; operated on by me successfully four years ago for lacerated perineum, and later another operation for severe hemorrhoids. Wife of a poor, ill-paid clergyman, and hence her life was a constant struggle properly to feed and clothe her large family. I have known her from childhood. She was always a most exemplary Christian woman.

Her head began to trouble her not long after the first operation, and she attributed it to the ether, which, however, she bore perfectly well in both operations. She had strange feelings, as if unconscious and in a fright or dread of ether, especially at night. Exposed to the sun in August, 1881, she had an attack of heat-exhaustion, followed by a second attack a week later. After this, her menstruation, always previously easy and regular, ceased for three months. During this time she was treated for malaria and her head became worse, which she attributed to the quinine. She became very nervous and



sleepless; lost all self-control; could not bear any noise of the children, the church-bell, or even her own voice. She became unable to do any work, and had extreme depression of spirits; attempts at suicide were repeatedly contemplated, but, though almost determined to end her life, she was deterred by her religious fears. These emotions were readily confessed to me and to her husband. In December, 1882, her menstruation became very profuse, and was continuous for three months. Since then it is not continuous, but is still very profuse.

Meantime, in October, 1881, by spells her sexual appetite, till then a matter of little moment, became immoderate. Day and night it was an exquisite physical and mental torment, and even led her to repeated self-abuse when it could not be gratified. This nymphomania and her head-symptoms were always worst at her menstrual period. Finally, she went voluntarily to an insane hospital in March, 1882, being utterly unfitted for her household duties and in constant dread of suicide, but soon returned home.

January 2, 1883. I saw her; head still as described, and she was almost desperate; uterus normal, except some erosion at os, and freely movable; clitoris and other generative organs normal. Her attacks of nymphomania were still frequent and severe, especially during menstruation. She was fast passing towards permanent insanity. She loathed herself for her abnormal sexual appetite; she had struggled against it, as well as against her suicidal intent, till she was ready to hail anything that gave the faintest hope of relief at any risk to life, for which she cared absolutely nothing. She had been under varied and excellent care, and every moral means and all promising drugs had been freely tried. I therefore proposed Tait's operation, to which she and her husband instantly assented.

4th. Operation; ether; antiseptic method (carbolic acid), with spray; bladder emptied; incision three inches in median line upward from pubes; layer of fat (she was well nourished) one inch thick, belly-wall two inches. Left ovary found without difficulty; its pedicle pierced by needle with eye in the point carrying a double carbolic silk ligature; ovary and Fallopian tube tied separately and ligatures cut short. One ovarian vein was varicose and as large as the little finger; ovary and tube both removed. Two pedunculated growths of the size of peas were attached to the ovary, one directly and another from the middle of a long foot-stalk attached at the two ends to the ovary and to the tissue between the ovary and tube. The right ovary was found with some little difficulty; as it was pulled out of the wound a small cyst burst. It was treated precisely as the left, and tube and ovaries removed. Both tubes and ovaries were intensely con-

gested (her last menstruation was five days past); several small cysts existed in each.

Her recovery was uninterrupted. She had a little bilious vomiting, and retention of urine requiring the catheter, but no pain; and no medicine.

8th. A moderate vaginal hemorrhage began, which ceased four days later spontaneously.

9th, 11th, and 14th. The stitches were removed. Her highest temperature was 99.4°.

19th. Down-stairs.

23d. Went home. Since then I have seen her repeatedly, the last time in the spring of 1885. Her mental symptoms and head-troubles have gradually become better. For the first six months or more she was often despondent, but she gradually recovered her cheerfulness to a large extent, resumed her household occupations, and is perfectly well. The nymphomania ceased from the time of operation, save two very slight and short attacks. Coitus is rare, but is entirely normal, and is not followed by any tendency to her former deplorable condition.

*Case III.—Uterine Myoma; Severe and Long-Continued Hemorrhage; Operation; Death.*—Miss W., æt. 40, first menstruated at fourteen, always profusely. For the last seven or eight years much worse, the flow continuing ten to fourteen days. In May, 1884, she began to suffer from continuous hemorrhage, which has persisted till the present date, January 2, 1885. Occasional severe hemorrhages also occurred. She is very pale and anæmic, with waxy lips, and has lost much flesh and strength, especially of late. To-day I examined her under ether; uterus three inches in length, and movable; a myoma as large as the fist was discovered in the anterior wall and fundus. Hypodermic injections of Squibb's ergot, in f3j doses every second day, were used, to which, later, was added f3j of the fluid extract of ergot daily, with tonics and good diet.

January 29. Has passed the menstrual period without noticeable hemorrhage, and to-day, for the first time since last May (excepting two days), has dispensed with a napkin. From this date till April her menstruation ceased. In April and May she had a normal discharge. But in June the hemorrhage returned, and continued so profusely as to threaten life.

July 4, 1885. The hemorrhage having been checked for three days by the above means, I operated. The tumor, which had clearly increased in size, was immediately seen on uncovering the belly. Ether; antiseptic precautions, including the spray (carbolic acid); bladder emptied. The enlarged uterus was so much in the way that the ovaries could not be seized through the small incision first made in the linea alba, the ovaries not having been carried up with it, and it had to be

prolonged one inch above the umbilicus. The whole hand had to be introduced, the uterus lifted and pushed forcibly aside, and the ovaries were even then reached with the greatest difficulty and after several attempts. The ovary and tube on each side were removed, the pedicle being tied with stout carbolized silk, which was cut off short.

The left tube was attached to the ovary at the fimbriated extremity; two cysts, one filled with blood and one with serous fluid, existed in this ovary, the stroma of which was largely cirrhused. One large (size of an English walnut) and one smaller serous cyst were found in the right ovary, and its stroma was atrophied and cirrhused. All four cysts were ruptured during removal. About eight ounces of serum were found in the peritoneum.

5th. The wound was united with silver-wire sutures after careful cleansing of the peritoneal cavity (there was no bleeding), and then dressed with carbolized gauze. Symptoms of peritonitis began to develop, and in spite of all remedies progressed to a fatal issue on July 7. The temperature was 102° to 103° till shortly before death, when it rose to 106°.

*Autopsy.*—July 8. Recent lymph was found over a considerable portion of the belly contents, with an ounce of pus in Douglas's cul-de-sac. No hemorrhage had occurred.

#### NOTES ON RECENT PROGRESS IN PHYSIOLOGY AND PATHOLOGY IN PARIS.

*VULPIAN'S RECENT RESEARCHES ON THE  
PHYSIOLOGY OF THE BRAIN.*

**P**ROFESSOR VULPIAN, the well-known physiologist, has, in a series of communications to the Académie des Sciences, described a long course of experiments, and their results, which throw a little new light on that obscure question, the physiology of the brain. Pflüger's theory is generally admitted by physiologists. MM. Rosenthal and Marey are among the rare exceptions who believe that it is based on results which have not been clearly demonstrated. This theory admits that electric stimulus communicated to a nerve becomes more and more intense in proportion as it travels along the nerve from the stimulated area towards the periphery, therefore of necessity an electrical stimulus of unvarying intensity produces muscular contraction more and more exaggerated according to the increased distance of the stimulated area from the muscles. Another logical deduction from Pflüger's theory is, that a current which is too weak to provoke muscular contraction

near the peripheral extremities would have this effect if the current communicated the nerve-stimulus to a point farther removed from the nerve-terminations.

M. Vulpian made the following experiment, which negatives Pflüger's theory. A dog was submitted to the effects of chloral until the reflex phenomena which have their origin in the medullary substance were entirely suppressed. The external popliteal nerve was then isolated at the upper part of the thigh, and a glass rod was passed under it without cutting it. The tibialis anticus was isolated in the same manner, and it was stimulated by a current from Du Bois-Reymond's apparatus. When the two coils were separated by a distance of five hundred and ten millimetres, the foot contracted. The external popliteal was stimulated by this same current, but no movement was provoked. The coils were then placed closer together by fifteen millimetres, at a distance of four hundred and ninety-five millimetres, and contraction took place. Other experiments made by M. Vulpian were equally adverse to the accuracy of Pflüger's theory.

Having obtained these data concerning the peripheral nerves, M. Vulpian extended his researches in order to ascertain if the same phenomena were repeated in the brain, and if the gray substance presented certain areas, some more easily stimulated than others, as is supposed by some physiologists who have studied the effect of electrical stimulus on the cerebral surface. When in a dog's brain those cortical regions which are admitted to be the motor centres for the facial muscles, for the fore and hind legs, are successively subjected to the influence of an electrical stimulus, it is observed that the first region enumerated is influenced by a weaker current than the second, and the second by a weaker than the third. The distances between the coils of a Chariot apparatus were respectively one hundred and eighty-five millimetres, one hundred and seventy-eight, and one hundred and seventy-five. As the experiment first described demonstrates that the strength of the current must be proportionally greater the farther the region stimulated is removed from the periphery, it is not logical to suppose that one cerebral region is more easily stimulated than another, but that it is a question of distance, and a certain proportion of stimulus is spent on the road (by resistance). This

second experiment is additional evidence that Pflüger's theory is fallacious. Its results, likewise, have a direct bearing on cerebral pathology which deserves serious attention. A stimulus communicated to regions of the gray cortical substance may be powerful enough to stimulate the nucleus of origin of the facial nerves and provoke facial movements, but not powerful enough, though actually in existence, to stimulate the nuclei of origin of the nerves of the limbs.

M. Vulpian, farther on in his researches, succeeded in establishing a fact that negatives many others hitherto admitted with regard to cerebral localization. Many experimentalists believe that certain motor and sensory centres are localized in certain given cerebral areas. Some clinical phenomena seem to support this doctrine, others to disagree with it. M. Vulpian's experiments indicate that the gray cortical substance is not excitable by the current in the areas known as special centres, but in the underlying white substance. He isolated electrical conductors by means of gutta-percha and then passed them along the gray substance, and was thus able to observe that an electrical current which was not strong enough to stimulate the gray substance provoked movement. He also ascertained that if the gray substance was congealed by means of methyl chloride, an electric stimulus provoked movements in those limbs of which the motor centres had been localized in the gray substance which had been destroyed by congelation. These two experiments indicate that the centres which had been localized in certain regions of the gray substance have no real existence. The real origin of the nerve-fibres is in the underlying white substance, and therefore the gray substance does not present isolated groups of cells affected to different functions. This peculiarity of structure, moreover, is entirely contrary to what is known of the intimate structure of the gray substance.

M. Vulpian has ascertained by means of his experiments that the brain is capable of receiving a stimulus only during a few seconds after death. Once only he observed in a dog's brain the stimulation-period extend to nearly one minute and a half after the cardiac movements were suddenly arrested by electrization. M. Vulpian affirms that in those cases where experimentalists have believed that stimu-

lation of the cerebral motor regions has lasted longer, they have mistaken for cerebral stimulation contractions resulting from direct electrization (by direct or diffused currents) of the nerves and muscles near the brain. The contractions produced by faradization of the cerebral lobes a few minutes after death never take place in the limbs, but are always limited to the muscles of the face (especially the temporal muscle) and the muscles of the neck (the trapezius muscle included). M. Vulpian's assertions are in reference to experiments made after part of the cranium has been removed. The results of those made under other conditions cannot be considered valid. If the faradic current is not very intense, these contractions are always limited to the side faradized. If the left cerebral lobe be electrically stimulated, the contractions appear on the left half of the face and neck. If the current be sufficiently strong to provoke contractions on both the left and the right side, they are always more marked on the side which has been submitted to faradization. Direct stimulation of nerves and muscles by means of direct or diffused currents is followed by phenomena exactly similar to those obtained by the following experiments, in which stimulation does not enter into the question.

A few minutes after crural pulsation was arrested in a dog by faradization of the cardiac ventricles, the brain was quickly removed by cutting the spinal cord behind the medulla oblongata and cutting also the cranial nerves. After a few minutes had elapsed, the brain was carefully replaced in exactly its normal position. The electrodes of an apparatus of induction-currents were placed on the cerebral lobes. The points of these electrodes were at a distance of .005 of a millimetre from each other. A strong current was then passed, and the temporal muscles and the muscles of the side of the neck corresponding to the cerebral lobe electrified were electrified. When the posterior third of the cerebral lobe was faradized, the muscles of the neck especially contracted, but still more powerfully when the surface of the cerebellum was stimulated. These phenomena occurred about half an hour after cardiac contraction was arrested. When the electrodes penetrated the lobes, the contractions were more violent than when applied to the surface. Contractions also occurred when,

after the brain was removed, a moist sponge was placed on the medulla oblongata. When a faradic current was passed through the sponge, contractions of the temporal muscle or of the muscles of the neck took place on the side electrified, according to the areas which received stimulation. M. Vulpian has, by electrifying the surface of the wet sponge by a strong current, provoked contractions in the temporal muscle of the corresponding side forty-five and fifty minutes after circulation had ceased. It generally happens that these phenomena that are clearly observed twenty-five minutes after circulation has been arrested are not repeated thirty-five minutes afterwards.

These experiments have been made on dogs; but M. Vulpian does not believe that the period of cerebral stimulation after death in adult dogs differs greatly from that of other adult mammals, unless they are hibernating mammals and in a state of hibernation.

The cause of death influences but slightly the length of this period. In cases where death results from sudden arrest of the circulation, the stimulation-period after death is of the longest duration.

(To be continued.)

### TRANSLATIONS.

**TOTAL EXTIRPATION OF THE CARCINOMATOUS UTERUS.**—Schultze, of Jena, contributes to the *Deutsche Medizinische Zeitung* (Nos. 1-4) a paper containing the report of twelve cases of extirpation of the uterus for cancer, three by abdominal section, all fatal, and nine by vagina, of which seven recovered. He insists upon the importance of early diagnosis, and reviews the history of the operation to prove that the earlier that patients suffering with carcinoma come under operative treatment the greater will be the proportion who, after several years have passed, will remain in good health. General practitioners are particularly enjoined in all cases of irregular hemorrhages from the genitalia of women, whether married or single, especially from the thirty-sixth year on, to make an exact local diagnosis of the cause of the bleeding, so that even an ulcerated carcinoma of the uterus shall be early recognized. The great majority of uterine cancers are still amenable to treatment

when the ulceration has not progressed far. The possibility of the existence of cancer of the uterus makes even a leucorrhœa, at this time of life, occasionally of great significance.

With regard to the relative frequency of cases of uterine cancer, Schultze points out an error which has crept into a number of text-books. Glatter's statistics, based upon the 37,106 deaths occurring in Vienna of women over twenty years of age, showed that 937 died with uterine cancer (25 per thousand). The greatest proportion was noticed in the deaths occurring from 46 to 50 inclusive, 2763, of which 183 were of uterine cancer, or 66.2 per thousand. Guserow (in Billroth's *Handbuch der Frauenkrankheiten*), in taking the cases by decades (instead of quinquennially) unconsciously doubled the death-rate. Schröder (*Handbuch der Krankheiten der weiblichen Geschlechtsorgane*) made a greater mistake in taking the figures of Glatter to represent the actual mortality from uterine cancer, whereas the original only referred to the proportionate mortality from this cause in the number of deaths from all causes. This error led Schröder to state that 6.62 per cent. of women at the age of 46 to 50 years die of uterine cancer, which is about eighteen times too great. The actual mortality at this age, according to the statistics above referred to, compared with the experience of life-insurance companies, shows that the proportionate mortality at this age among women is only about thirty-six per ten thousand.

Comparing the results of the abdominal and vaginal operations, Dr. Schultze says that, according to Hegar (1881), the mortality of Freund's operation was 71 per cent. (and it may be still greater, since operators do not always promptly report their fatal cases), and that of the vaginal total extirpation only 25 per cent. Sänger (1883) placed the mortality of 133 vaginal operations at 28.6 per cent., whereas Schmidt, continuing the statistics in 1885, collected 242 vaginal total extirpations, with only 64 deaths (26.3 per cent.).

Cases will occur in which total extirpation is indicated, but, on account of the size of the uterus, it can only be removed per abdomen. In such cases the peritoneal part of the operation should be performed as quickly as possible. The preliminary operation of cutting around the carcinoma per vaginam (as recommended by Rydygier)



not only increases the safety of the patient at the time, but also enables the operator to be sure that nothing of the carcinoma which can be removed remains in the vagina. If it be possible thus to free the cervix uteri from the vagina, the peritoneal section can be accelerated, and the danger of the Freund operation materially lessened.

In all cases a careful diagnosis as to the extent of the carcinoma should be made, under an anæsthetic. This is done by placing the index and middle fingers in the rectum, the thumb in the vagina, while the other hand is placed on the abdomen. If this examination show that the carcinoma of the vaginal portion reaches to the height of the cul-de-sac of Douglas, then, obviously, nothing remains but the radical operation of total extirpation.

In cases of isolated carcinoma of the corpus uteri, the amputation of the fundus of the uterus per abdomen, theoretically, would be the proper operation; yet statistics show the danger of this operation to be much greater than that of total extirpation. In cases of carcinoma of the fundus, therefore, when the uterus is small enough to be removed through the vagina, this operation should be preferred to removal by laparotomy; for the amputation of the fundus per abdomen shares with Freund's operation the danger of injury to the intestines, and also that of peritoneal infection by the cancer-juice from the section. This is avoided in the vaginal method of total extirpation. Any danger of infection of the peritoneum through the healthy cervix can also be excluded by efficient tamponade of the cervical canal. The supra-vaginal amputation of the carcinomatous corpus uteri by means of laparotomy would therefore be reserved for those cases only in which the uterus is too large to be removed through the vagina.

Dr. Schultze states that a vaginal amputation of the fundus has never been accomplished to his knowledge, but he considers it a possible operation in selected cases. The injury of the operation is still less if the anterior wall of the vagina is left intact and the cervix can be left in connection with the bladder. Should unexpected difficulties arise preventing the carrying out of the operation, it can be completed as one of total extirpation.

An operation for the removal of the carcinomatous uterus is based upon the

possibility of the removal of the entire carcinoma, but the extent of the disease is not always easy to determine, and can only be decided by experiment. Most operators have uncompleted operations in their experience. The value of statistics depends upon a report of all cases, whether favorable or unfavorable.

**TREATMENT OF LUPUS BY APPLICATIONS OF ICE.**—The slow course of lupus, as compared with that of tuberculosis of the interior organs, certainly bears some relation to the scanty appearance of bacilli existing in lupus new-formations, which in turn is dependent upon the colder temperature of the external skin, as it is well known that at a temperature of 30° C. the bacilli develop very sparingly, and at 28° C. no further development occurs.

Professor Gerhardt, of Berlin (*Berliner Klin. Wochenschr.*, No. 41, 1885), in view of this fact, attempted through refrigeration to check the growth of the bacilli, and consequently the further formation of lupus-tissue. He suspended an ice-bag from a frame directly over the patient so as to cover the whole or greater part of the surface of the lupus without pressure upon it, when the patient was lying upon his back. The average length of the ice-application was three hours twice daily.

In three cases of lupus of the nose, although the treatment could be applied for only a comparatively short time (two to four weeks), the result was very evident. The diseased areas became covered with a new skin, infiltration disappeared, and the skin was soft and smooth, though still a few nodules were present. In a fourth case of lupus, involving the whole left cheek, the region of the lower jaw, the ala of the nose, and the eyelid, after two months' treatment only one small tumor or nodule was left in the region of the lower jaw. In the other parts the skin was smooth, pale, and thin.

Whether the cure is permanent or not remains to be determined, as, according to the investigations of Schill and Fischer, the bacilli may retain their vitality for weeks in putrefying sputa; yet it is to be supposed that when exposed to such unfavorable vital conditions they are put at great disadvantage in the struggle with the vital processes going on in the cells surrounding them.—*Deutsche Medizinische Zeitung*, No. 2, 1886.

PHILADELPHIA  
MEDICAL TIMES.

PHILADELPHIA, FEBRUARY 6, 1886.

EDITORIAL.

ÆSCULAPIA VICTRIX.

**I**N the January number of the *Fortnightly Review*, Mr. Robert Morris writes entertainingly, under the above heading, of the origin and progress of medical education for women in Great Britain. His facts are almost altogether derived from English experience, although the status of female medical practitioners in this country is once or twice referred to.

The London Medical School for Women was started in 1874, largely through the energy and ability of Dr. F. E. Anstie, who was elected first dean, but who unhappily died from septicæmia contracted while making an autopsy before the school was opened. Among the lecturers have been the following: Messrs. Reeves, Rivington, Heaton, Berkeley Hill, and Critchett, Professor Shaefer, and Drs. Donkin, Sturges, Thomas King Chambers, Bastian, Cheadle, and Sankey. Probably no single school in London has a more brilliant teaching staff. Most of the above are also attached to other schools in the metropolis. Active work was begun on a capital of little more than five thousand dollars.

It was three years after the organization of the school before medical women could qualify before any of the licensing bodies, and it was not until 1878 that the authorities of London University voted to admit women to all the degrees. The vote by which this conclusion was reached is interesting, and apparently shows that doctors are more conservative than other classes of men of liberal education. The vote is as follows: in favor of granting

the degrees were twenty-two graduates in medicine, thirty-three in science, twenty-eight in law, and one hundred and forty-eight in arts; the votes in opposition to granting examinations and degrees to women were cast by eighty-three graduates in medicine, four in science, nine in law, and thirty-six in arts.

Since the school was opened in 1874, one hundred and fifty students have been admitted, about one-third of whom have qualified for practice in Great Britain.

Regarding the chances of medical women for professional success, the writer in the *Fortnightly* takes, on the whole, a favorable view. In fact, he thinks "that a woman has rather a better chance than a man in starting as a doctor, for if she settle in a good provincial town she usually has no competitor of her own sex to fear, and, without buying a practice, she is pretty sure, even though she put forth no very extraordinary efforts, to earn about one thousand dollars a year after being in practice for two years."

In the United States the chances of success for the average female practitioner are probably a little more favorable.

The removal of certain conservative restrictions in a number of local, State, and national societies, which formerly prohibited female membership in such societies, is an evidence that in this country also the claims of medical women are becoming recognized by the profession. The recent appointments of female *internes* in some of the Paris hospitals, and of a woman as medical inspector of schools in that city, show that the daughters of Æsculapius have likewise obtained professional standing in France.

With a fair field and perhaps a little favor from the sterner sex, the path of the female practitioner should henceforth be, if not exactly and exclusively a path of roses, at least one in which the thorns are not too numerous and salient. It is evident that women have entered the profession to stay.

## THE REDUCTION OF EXCESSIVE BODILY WEIGHT.

IN the method of Oertel, obesity is to be overcome by decided reduction in the fluid elements of the food, conjoined with systematized muscular exercise. From the accounts published regarding the "Terrain Kur," it is seen that not only is the total weight of the food reduced to about one-half, but the water is reduced to even a lower proportion. The constituents of the diet are also materially altered by reducing the carbohydrates and increasing the nitrogenous principles. For instance: a healthy man takes, on the average, about 130 grammes of albumen, 84 of fat, and 404 of carbohydrates; Oertel gives his patients 169 of albumen, 43 of fat, and 114 of carbohydrates. This system of treatment thus briefly indicated bears the endorsement of personal experience, Dr. Oertel having applied the teachings of Pettenkofer and Voit to the improvement of his personal health, comfort, and appearance. Although his method has been received with evident marks of favor by the medical press generally, we are glad to observe that the *London Medical Record* sounds a note of warning, on the ground that it does not seem to be based upon sound physiological principles. Even though conducted, as its author urges, under strict medical supervision, it is possible that serious strain may be put upon the organs of circulation and the kidneys, which under such circumstances are always in a more or less pathological state. The diminution of the fluids of the diet acts upon very nearly the same principle as the administration of concentrated saline solutions in cases of pleuritic effusion, as lately recommended by Dr. Hay, of Aberdeen,—the result aimed at in each case being to reduce the total volume of blood, and thus to stimulate the absorbent vessels to greater activity.

An essential part of the treatment of Oertel consists in requiring the patient to take a course of exercise in walking, first

on a level ground, and then on gradually increasing gradients. This involves the selection of a site for the carrying on of the cure in a mountain region, and several establishments under medical care have been opened at Meran, Bozen, Arco, Baden-Baden, Abbagia, and elsewhere. Here the details as to diet and pedestrianism are carefully regulated by the medical attendant, and the reports which have been received of the results of the treatment have been highly favorable.

Perhaps the pure mountain air inhaled during the daily walks may have exerted no inconsiderable influence in improving the bodily vigor, but the restriction in eating and the limitation of alcoholic stimulants to the minimum, with the muscular work daily, are measures admirably calculated to reduce excessive corpulence, provided that due regard be had to the state of the kidneys and circulation. These recommendations might almost be summarized in the classical advice of Abernethy, "to live on sixpence a day and earn it," which many might learn to do with advantage.

While overfeeding finds its natural corrective in semi-starvation, and the results of indolent and luxurious habits may be overcome by temperance and physical exercise, it is evident that great care is required in making special and severe and sudden applications of this principle in a class of subjects whose powers of vital resistance are low, and who are often regarded as *opprobria* of both medicine and surgery.

## PARVIN ON THE REMOVAL OF THE UTERINE APPENDAGES.

IN the course of the discussion upon the paper of Dr. Parish which appeared in our last issue, when it was read before the County Medical Society, Dr. Parvin admirably summed up the principal features of the subject in the following words:

"The great point in the whole matter is the necessity for sterilizing women. If it be right, as it certainly is, in given conditions to destroy

the very purpose of woman's sexual character and to render reproduction impossible, the question arises, What are those conditions? The gravity of the physical change in woman's nature cannot be too strongly presented. Notwithstanding all that has been said in regard to a woman's retaining sexual desire after the removal of her ovaries, she is no longer a woman so far as the essential design of her physical nature is concerned: her reproductive power is gone. There may be sexual enjoyment, but she has become one of Lord Bacon's barren virgins. She now is one with whom sexual intercourse occurs for pleasure, not with the hope of posterity. In this respect she is no longer a wife, but becomes a prostitute,—one for whom sexual intercourse is an end, not a means. So far as sex is concerned, she has become a neuter.

"Several indications for the operation have been presented, but I will refer to only one or two. The first of these is the presence of uterine myomata causing dangerous hemorrhage. When these tumors cause hemorrhage they are usually submucous. But a submucous tumor is in the process, usually, of becoming pedunculated, and it is possible that in some of the cases where removal of the uterine appendages has been done, a little patient waiting, with temporary means for moderating the hemorrhages, and one might have found the tumor pedunculated, when its removal through the vagina could have been effected.

"Again, we have to consider the mortality of the removal of the appendages for myomata. I doubt the propriety of taking Mr. Tait's statistics as our guide. The question is, How many will die when the operation is done by moderately skilled hands, or the average skill of those doing such operations? At the Copenhagen International Congress, Wiedow reported one hundred and forty-nine cases, with a mortality of ten per cent. Tissier more recently has collected one hundred and seventy-one cases, with a mortality of 14.16 per cent. In the latter's cases there were eleven in which the result sought by the operation was not attained. A most interesting case has recently been reported by Mr. Tait in the *British Medical Journal*, where removal of one ovary and a part of the tube failed to arrest the growth of the uterine tumor, as well as to stop the hemorrhages. Only the tube

and ovary of one side were removed, he failing to find the other. Hysterectomy was done, and there was found to be congenital absence of the tube and ovary on one side. He explains the continuance of the hemorrhage and of the growth of the tumor by the fact that only a part of the tube was removed in his first operation.

"And here arises the question as to the organs it is essential to remove, a question that is answered differently by different authorities. Mr. Tait holds that the tubes are the essential organs, and in some cases has removed them alone, leaving the ovaries. On the other hand, Sir Spencer Wells would not remove the tubes unless they were diseased.

"I know of no statistics showing the mortality in moderate-sized uterine myomata; and it is in such cases removal of the uterine appendages has given the best results, for when the tumor is very large of course the mortality is greater, and the result finally not so certain. A comparison of such statistics, could they be had, with those of removal of the uterine appendages in regard of mortality, would be most valuable.

"A word as to diseased oviducts demanding removal. It is certainly remarkable that Mr. Tait has met with so many such cases, while Emmet has seen but two, and both of these got well without an operation. Dr. Emmet has told me that the greater prevalence of such serious disease of the tubes in Mr. Tait's practice is to be attributed to the greater frequency of gonorrhœa in the women there than in our country.

"I believe there is much to be learned as to the limitations of the operation, and it will probably be years before firm ground is furnished upon which all the profession can rest. Dr. Parish's contribution helps to the attainment of this end. I think most if not all of his conclusions can be accepted."

## NOTES FROM SPECIAL CORRESPONDENTS.

### LONDON.

WHILE medical journals grow and multiply and prosper with you, a very different state of affairs obtains here. An attempt some ten years ago to float a new metropolitan medical journal ended in failure, and now a well-known if secondarily important member of the little group of



journals devoted to medicine is disappearing from vision in London. Forty years ago the *Medical Times and Gazette* was a vigorous periodical, remarkable for its scientific articles and its *esprit*. It possessed originality, and gave some long series of articles which afterwards appeared in book-form as "The Races of Man," by Knox, famous or infamous from his association with the Burke and Hare murders for anatomical purposes in Edinburgh. D'Arpenty on "The Hand" appeared in a series about the same time. In the spring of 1862 a most valuable series of papers on "Physiognomical Diagnosis," from the pen of the late Professor Laycock, Professor of Practice of Physic in the University of Edinburgh, came out in the then flourishing *Medical Times and Gazette*. Marion Sims was severely handled by it for the conduction of his observations on sterility. It possessed a high tone, and was a keen stickler for medical ethics and proprieties. For long Sir Spencer Wells was its editor, a position he held when rescuing ovariectomy from the list of unjustifiable operations. Then Jonathan Hutchinson was one of its staff, and many a thoughtful, masterly article was the product of his pen. The late Dr. Silver was for years its guiding spirit. But somehow it lost its prominent position. The well-known medical publisher, Churchill, was its proprietor; and in it and the defunct *Medico-Chirurgical Review* he filled a conspicuous position in medical literature. But some years ago the *Medico-Chi.*, as it was termed, dwindled out of existence, and now the *Medical Times and Gazette* has followed its example. A certain spirit of Philistinism crept into both as death approached, and neither can be said to have died lamented—unless it is by those who took its pay. Under the cover of anonymity some ruthless and savage attacks were made on rising men by the *Medico-Chi.*, who did not either forget or forgive their assailant when they rose to be formidable. We may say "Peace to their ashes" in both instances.

For some months past it has been my intention to give some account of the discussion on glycosuria which came off at the annual meeting of the British Medical Association at Cardiff in July last. But so far I have waited in vain for an account of it in the Association's Journal, and inquiry elicited the fact that some of the speakers experienced a difficulty in putting into writing what they had said, or thought they had said, or wished they had said: anyhow, they had not made up their minds what to put on record. At last Dr. Pavy's introductory address has appeared in the *Lancet*, and it becomes possible to give some—if but a fragmentary—idea of what was said. Of course the medical world looks with the greatest interest to what Dr. Pavy had to say, he having been for long the leading authority on the subject of diabetes. As "the clinical aspect" alone came under

consideration, the pathology of the disease and its relation to a high blood-pressure in the hepatic artery were not touched upon. He included classical diabetes mellitus, as well as those cases where sugar appears in the urine without any subjective phenomena, under the wide term "glycosuria."

The first matter he discussed was the age at which it may appear, his opinions being based on thirteen hundred and sixty cases from his private note-books. It seems no less than eight cases appeared in children under ten years of age. Another case, not included in his tables, occurred in an infant one year and three weeks old. "The infant had been rapidly wasting, had shown great greediness after fluids, and was passing an excessive quantity of urine, which saturated the articles worn and rendered them stiff on drying." The infant died exhausted a month later. Then he said, "As regards the family history, there are some interesting points to be noted. There can be no doubt the disease runs in families." He then gave a series of cases corroborative of this statement. Three sisters, over fifty years of age, consulted him,—one in 1873, one a year later, and an older sister (fifty-seven) in 1879. All three are still alive. Both their parents had consulted him for glycosuria some years previously. Of another family, two brothers and a sister were diabetic. In another instance, two members of the family died young with it, and another member, aged thirty-two, was suffering therefrom. This last "still continues in good health." So, after all, diabetes is not so deadly as it is usually supposed to be by those comparatively unfamiliar with it. In another family the grandmother and mother died of diabetes, and four out of five girls had their urine laden with sugar. One diabetic had three sons by various mothers, all of whom died with diabetes. He then went on to say, "I think there is every reason to believe that it is distinctly more common among members of the Jewish race than among others,"—a fact which goes to corroborate the view of the relations of glycosuria to mental exercise.

As to its mode of onset, he divided those cases where it came on gradually and insidiously from those where it occurred quite suddenly. In many cases, no doubt, a glycosuric condition had existed for a considerable period of time before its presence was detected. This he held proved by the fact that trousers which had long lain by were found to have splashes of urine leaving a white, sugary stain behind,—a stain not easily removed by brushing. It is in elderly persons especially that these stains occur. On the contrary, the attack in some cases was sudden and abrupt. In such cases some shock to the nervous system usually stood as an exciting cause.

"Then as to duration. This varies within very wide limits. It may go on for years without seriously impairing the patient's general

health, or it may terminate very speedily in death." In one case the disease ran its course in four days. In another the diabetes ended in a carbuncle over the parotid gland, running a course of a few weeks. Those cases where the condition goes on for years ("the patient meanwhile enjoying a fair state of health") are most common in elderly persons, though not confined to them. In one case glycosuria had existed in a lady for over twenty years without any impairment of her health. Such a case, he said, was not very unusual. Even in young people the case is not necessarily of short duration. A young lady whose mother died diabetic commenced to pass sugar in 1877. At the present time she voids a considerable quantity of sugar, though "there is nothing in her appearance which would lead one to suppose that she had anything the matter with her." She had married and borne children. He continued: "Although diabetes, when once developed, generally persists, cases occur where it has disappeared. I have from time to time met with these cases in my practice. I do not allude to mere control of the disease under dietetic management, but a complete eradication." One such case he related where in 1881 the patient was undoubtedly diabetic and in 1884 had no trace of it remaining. Sometimes glycosuria is but "a passing condition." He stated that diabetes insipidus and diabetes mellitus may occur in the same individual, and one may disappear, leaving the other behind. Or the one may precede the other, both disappearing ultimately.

He declined to discuss the causation of diabetes, as that involved its pathology. In some cases hydrosis of one-half of the body was found with glycosuria. A hypertrophic state of the liver was found as a concomitant of diabetes in a number of instances. Then he had seen it along with "abnormal conditions of the nervous system." Especially did he think it was found with locomotor ataxia. Sometimes one precedes the other; sometimes they appear simultaneously. There may be disorder of sensation. Then he also thought it linked with exophthalmic goitre. He then expressed his disbelief in "acetonæmia;" and as to the "coma," he had described it long before Küssmaul. Coma, he held, was apt to be induced by any fatigue. It is preceded by a curious breathlessness, which is followed by drowsiness. He did not think it caused by fatty emboli. Albumen may appear in the urine and go on for years. When present in small amount he attached no significance to it. "Other cases, however, exist which pass on to well-marked Bright's disease; and it is to be noticed that generally, as this condition becomes established, the diabetes has a tendency to subside."

Such, then, were the conclusions Dr. Pavy had drawn from his own experience.

The views expressed by the writer were

corroborative of the wide range of maladies embraced by the comprehensive term glycosuria. There were, of course, the cases of classical diabetes mellitus, kept at bay for a time by a rigid dietary, but going on, as a rule, from bad to worse. Also those of sudden origin arising in some mental perturbation, usually of an acute character. From the causal relations of acute diabetes we could reason upon the relations of the more chronic form to long, severe mental toil, strain, or worry. It would appear that in many cases there is mere glycosuria, which deepens and deepens until distinct diabetes, including the uncomfortable subjective phenomena, is developed. If in these cases the mental factor can be put in abeyance, the physical condition can be brought to a stand-still. When, however, this mental factor is disregarded, the case progresses steadily in a downward direction. The liver is perturbed in many of its functions by mental operations, and as to its glycogenic function it suffers as certainly as it does in the metabolism of albuminoids, about which there is not much difference of opinion. This cessation from mental toil is being recognized as a very important matter in the treatment of glycosuria, both preventive and palliative. Then there are persons who find themselves diabetic, who under a suitable regimen remain simply glycosuric, but who are subject to "diabetic storms" on any worry or trouble further upsetting them. Then there is acute diabetes which gradually subsides, to be awakened into life again on any like exciting cause in the future. One old lady known to me has one of these "diabetic storms" set up by an ordinary cold. She goes to bed, rapidly emaciates, with thirst and saccharine urine, but after several weeks loses her symptoms and regains her wonted and ordinary health. Gouty persons, and especially corpulent gouty persons, are very subject to glycosuria, sometimes giving rise to diabetic symptoms. When sugar appears steadily in the urine of an old gouty subject, who at the same time begins to lose flesh, the prognosis is very gloomy. At other times and under other circumstances a saccharine condition of the urine takes the place of gouty symptoms, sooner or later the glycosuria disappearing with a return of the wonted gouty symptoms. The great difficulty in cases of glycosuria is not so much to discover evidences of the presence of sugar in the urine as to interpret correctly its significance when found. As long as there is no wasting there is little ground for anxiety, it not yet having been proved that the kidneys suffer from the passage of sugar through them. But when wasting is developed, then the system is certainly suffering from the waste of its grape-sugar. So long as there is no emaciation, the condition of glycosuria is comparatively unimportant. Indeed, many corpulent persons of middle age pass sugar continuously for years,

—sometimes more, sometimes less. Here it would seem almost a sort of "waste-pipe" affair,—a drain of the surplus grape-sugar not required by the system, and without which the corpulent person would become obese and unwieldy.

The extent to which the diet must be regulated in each case depends upon the individual circumstances and requirements. One person may find it necessary to abstain from ordinary bread, while another requires merely to avoid sweets. No one with any experience of diabetic thirst, with its unquenchable persistency, would willingly increase it or add to it. But in the absence of it (and other diabetic symptoms) it is very questionable how far harm rather than good is the outcome of a strict anti-diabetic regimen. Indeed, many glycosuric persons are of opinion that they have endured more from the regimen than from the malady for whose relief it has been adopted. Each case must rest, as to diagnosis, prognosis, and treatment, upon its own merits,—one thing being certain, that all cases of glycosuria are *not* diabetes mellitus.

\* \* \* \* \*

What were the views of the other medical men who took part in this discussion must be recorded by some other pen. A decade has elapsed since Dr. H. C. Wood, then its editor, prevailed upon the writer to become the London correspondent of the *Philadelphia Medical Times*. Part of his instructions were to describe that inner life of the medical world in Great Britain which is a *terra incognita* to the roving correspondent; and this he has done from time to time, and not without incurring a certain amount of ill will and animosity in certain quarters. On the other hand, the manner in which his letters and their contents have been received in the Western Hemisphere was very gratifying to him. A man must be a colorless human chameleon who cannot rouse a feeling of hostility in some breasts; and such is not the writer's aim or ambition. He believes sundry desirable matters at home have owed some portion of their ultimate success to the outspoken utterances which have appeared in these letters. There are sundry other matters in the parturient stage to which he could have liked to lend a little obstetrical aid, such as it is in his power to offer. But a time comes when a correspondent must lay down his pen, and that time has arrived in this case. There is no longer the leisure which permitted of this correspondence being an agreeable pastime. As years advance, our interests are diverted into new channels. The advocacy of Dietetics in the Treatment of Disease is the absorbing topic with the writer at the present time. To him, indeed, it is the great therapeutic matter of the day, and he feels in duty bound to lend it what aid he can. Of the necessity of some systematic teaching of dietetics in a course of medical education no

one can entertain a doubt. It is surely as desirable that a medical man be taught how to feed a patient acutely ill as how to prescribe for him. If it be a pyrexia, surely it is as desirable to maintain the strength, and call as little as possible upon the body-reserves, as it is to keep down the body-temperature by antipyretics. To prevent exhaustion both matters must receive attention. Every sick person is more or less a dyspeptic, and dyspepsia requires appropriate and suitable food. Many dyspeptics can alone perform their daily toil by a watchful attention to their food and food-requirements. The writer believes his labors have not been without influence in advancing our acquaintance with the means of increasing the energy of the cardiac contractions,—that our knowledge of the means of stimulating the respiratory centres owes something to his observations and experiments. He hopes to do something towards a more intimate familiarity with the kinds of food required by different morbid conditions, and to demonstrate that it is within our power to improve the action of the liver, when impaired, by reducing the demands upon it to the minimum of the body-needs, while raising its tone by certain remedial agents. Consequently he must bring to a close a labor which has been a labor of love, and say "good-by" to his many readers. When his correspondence began, the *Philadelphia Medical Times* was a lusty infant: now it is a stalwart youth, giving promise of enduring manhood. It has his good wishes for it in the future, as it has had them in the past.

J. MILNER FOTHERGILL, M.D.

#### NEW YORK.

OUR community has read and heard a great deal about hydrophobia lately, particularly since the Newark children were sent to Pasteur for inoculation. There has been some talk of establishing a Hydrophobia Institute here for the purpose of carrying out the new treatment. As to the value of Pasteur's method and the desirability of establishing an institute, opinions differ. This is but natural, for the question is a complex one, and perhaps with some there are influences brought to bear which would render their judgment not altogether impartial. If one should base his judgment on newspaper accounts, he might suppose New Yorkers were lovers of sensationalism; but when it comes to acting they are practical, and before putting their hands into their pockets they generally inquire, *Cui bono?* So, with regard to founding a Hydrophobia Institute, they ask, first, is it true that Pasteur has discovered a preventive of hydrophobia? Second, granting that it is true, is his method practicable and without danger? Personal interest may lead some to desire the founding of such an institute. Probably there are some physicians and members of the

laity who would like to see such an institution established, if for no other reason than that it would be a novelty and serve to bring the medical profession into prominence. Others, on the contrary, oppose it upon this very ground, believing that, if it should finally be proved that the alleged discovery has no foundation, it will bring discredit upon medical and scientific investigation in general, and upon special investigation as to preventive inoculation against disease in particular. There can be no overlooking the fact that inoculation against smallpox has been abandoned, and there certainly will be far less opportunity for establishing the efficacy of such treatment to prevent the development of hydrophobia.

Hydrophobia occurs rarely even in the dog. The dog may not bite a human being. A large majority of persons bitten by a really mad dog do not have hydrophobia. A number of months and even of years may pass before there occurs any active manifestation of the poison in the person bitten. It is not known, should the subject survive it, that one attack would afford protection against another in case the person should be bitten again. Moreover, there is a possibility that the virus employed against the development of hydrophobia may itself prove injurious, or even dangerous. These facts cause them to hesitate about going to the expense of building a special institution for the treatment of hydrophobia. But the numerous newspaper interviews with men who are said to have had special opportunities for learning all about Pasteur's methods, and the sending of the Newark patients to Paris for inoculation at the hands of the great Pasteur himself, have created a decided sensation, and it is not impossible that some of our people of wealth may be influenced to endow such a hospital. If they would do so, with the proviso that if the institution did not fulfil the object for which it was built the funds or the completed building should go to the Academy of Medicine, the undertaking doubtless would receive the approval of the medical profession of New York. As to the objection against founding an institution in this country that all patients could be sent to Paris for treatment (as Pasteur has suggested), it would not be entertained for a moment if there were no uncertainties about the diagnosis, or if full confidence were put in the method adopted by Pasteur.

The daily press shows quite a fondness for publishing reports of some rare and extremely wonderful operation, like trephining the skull or amputating a leg, performed by Professor A. or the great Dr. B. We know that one of the rules of ethics by which the medical profession is presumed to be governed is directed against seeking unseemly publicity or advertisement. But the ranks of the profession are overcrowded, and overcrowding means com-

petition and rivalry. Consequently interviews with physicians, both young and old, continue to be easily obtained. For the same reason, there are many who would be willing to have wealthy people or the government found institutions which would pay them a salary for their services and at the same time give them publicity. There can be no harm if one who has specially fitted himself for a certain line of work or investigation desires employment in that direction, if it be of benefit to man; but due regard should be had for the rights of less enterprising members of the profession, who are not, however, less well qualified for the place.

We hear in this city comparatively little about the International Medical Congress. The majority of the profession, of course, have not a national reputation, and cannot expect to take much part in the meeting. Many of the more noted are "New Code" or "No Code" advocates, and would not expect to receive a very warm welcome under the existing condition of things, and others belong among those who are opposed to the action of the New Orleans meeting and of the Committee there appointed. They say, however, that if the original state of things were re-established they would do all in their power for the Congress; and if this course were adopted, probably our leading physicians would feel a special responsibility resting upon them to do all they could to make the Congress a success.

It is announced that Dr. H. B. Sands has resigned his surgical professorship in the College of Physicians and Surgeons, and that a concourse will be held at which Drs. W. T. Bull, W. S. Halsted, and R. J. Hall will take part, each delivering about ten lectures, after which the Faculty will decide which one shall fill the vacant chair. It is doubtful, however, whether Dr. Halsted's health will permit of his competing for the place.

At the annual meeting of the New York County Medical Association, January 18, 1886, Dr. Charles A. Leale was re-elected President, and Dr. P. Brynberg Porter Secretary. Dr. John F. Shady was elected Vice-President.

It having been charged that our Board of Health was extravagant, as a consequence the amount appropriated to this department by the Committee on Apportionment has been cut down for this year. Extravagance existed in fact, and the medical members of the Board did not do what they could to prevent it. They certainly deserve censure: still, the value of their public services is undeniable: but it is a difficult task to bring the average politician to see the necessity of spending much money for so intangible a thing as the "public health."

Nearly a hundred papers have been prepared for presentation at the meeting of the State Medical Society, to be held February 2, 3, and 4, and if all shall be read there certainly will be no time for the discussion of



medical politics. The prospects are that the question of a Medical Licensing Board will not again be discussed before the Society, but it may again be brought before the Legislature during the winter. Mr. Lawson Tait, of Birmingham, England, will read a paper "On Methods of Diagnosis." The meeting promises to be an unusually interesting one from a scientific point of view.

Our medical colleges are all being well attended this session. The College of Physicians and Surgeons have not yet begun the foundation of their new college building. The graduating class at the Bellevue Hospital College will receive a course of lessons in histology and pathology free at the Carnegie Laboratory. Dr. Biggs, of the laboratory, is on a visit to Europe to make special investigations relating to bacteriology, and during his absence will visit the laboratories of Pasteur and Koch.

The Post-graduate Medical School deny the report that they do not admit women physicians to their course.

*New-Yorker Medizinische Presse* is the name of a German monthly, of which two numbers have been published. Dr. George W. Rachel is the editor. New York has a large German population, and many German-speaking or German-reading physicians, and this journal meets a long-felt want. Dr. Wallace Wood has brought out a journal called the *Journal of Reconstructives, Dietetics, and Alimentation*.

J. D. Bryant, M.D., has been reappointed Surgeon-General of the State.

Dr. C. L. Dana has been appointed visiting physician to Bellevue Hospital.

Prof. Austin Flint will deliver the Address in Medicine at the next meeting of the British Medical Association.

The Alumni Association of the University of the City of New York held its annual dinner at Delmonico's, January 14. Many had not ten dollars to spare, and consequently were not present; but those who went enjoyed themselves profoundly.

Now and then a case of smallpox is reported to the Board of Health, but all fear of an epidemic seems to have subsided. During the week ending January 12, one hundred and two cases of diphtheria were reported, of which forty proved fatal.

At the Orthopædic Society, January 4, Virgil Gibney, M.D., presiding, Dr. Newton M. Shaffer presented an improved lateral extension shoe for talipes with which he had corrected some of the severest cases of the deformity known as equino-varus, the patient being able to go about during the treatment. He also presented an improved knee-splint, and Dr. M. Josiah Roberts presented an improved hip-splint. At the same meeting Dr. Le Roy Hubbard read a paper on excision for chronic disease of the shoulder, and Dr. Yale presented an interesting specimen illustrating

the lesions of acute osteomyelitis of the hip-joint.

At the County Medical Association, January 18, Dr. Lawrence J. McNamara read a paper entitled "A Contribution to the Etiology of Tumors," in which he expressed views adversely to the bacterial origin of cancer, and, incidentally, to the evolution theory, that an animal low in the scale of life may beget one higher. Dr. Janeway sent specimens illustrating epithelioma of the anterior wall of the œsophagus, causing paralysis of both recurrent laryngeal nerves by pressure.

At the meeting of the Section in Practice of Medicine at the New York Academy of Medicine, January 20, Dr. G. L. Peabody read a paper on "The Size of the Heart in Chronic Diffuse Nephritis," and a general discussion took place on the question "Are the Antipyretic Measures at Present Employed in Acute Disease Useful and Safe?" In his paper, Dr. Peabody showed that cardiac hypertrophy was less common in chronic diffuse nephritis than was generally supposed, and that the common clinical teaching that the presence or absence of hypertrophy of the left ventricle would enable the observer to diagnose the presence or absence of chronic Bright's disease had no substantial basis.

## PROCEEDINGS OF SOCIETIES.

### PHILADELPHIA COUNTY MEDICAL SOCIETY.

At a conversational meeting held at the Hall of the College of Physicians, Philadelphia, December 9, 1885, Dr. R. J. Levis, President of the Society, in the chair, a paper was read by Dr. James C. Wilson, entitled

#### THE CLIMATIC TREATMENT OF PULMONARY CONSUMPTION.

(See page 232.) This was followed by a paper by Dr. S. S. Cohen on

#### ARTIFICIAL CLIMATIC EFFECTS FOR "STAY-AT-HOMES."

(See page 339.)

#### DISCUSSION.

Dr. J. Solis Cohen: I think that we can all agree with most of the points mentioned by Dr. Wilson. There is great difficulty in selecting climates for those who are able to go away, and there is great difficulty in selecting the cases. My own opinion is that the cases which should be sent away, taking it for granted that those only are sent who can afford it, are those who are constantly "catching cold" from changes in the weather. They are to be sent away to avoid these changes. The best plan in selecting a climate appears to be that of finding out under what condi-

tions the patient is in the best health at home, and then to send him to a place where similar conditions are most constant.

Another important point, fully as important as the change of climate, is that the patient go to a place where he can obtain plenty of good food. The only hope of restoration in this, as in other chronic diseases, is from due nutrition. Medicinal and other treatment must be subordinate thereto. The secondary matters of avoiding places where there is overcrowding of sick people, of providing due occupation, amusement, etc., must also be considered in selecting the place of resort.

I should like to call attention again to a place already mentioned by the writer of the first paper. Lakewood is located some fifty-four miles from Philadelphia, in the midst of several thousand acres of pine forest, and here nearly all the benefit to be derived from such a climate can be obtained. In the winter-time, of course, it is necessary to wear shawls and wraps; but patients can often go out sleighing, and may almost dispense with the shawls and wraps when they reach the roads through the pine woods. There is a large hotel provided with sun-parlors, where patients may sit in the sun and take exercise in inclement weather. The patient can be readily visited by his friends, and even may come home from time to time for a day or two, if necessary, for business purposes. There are better accommodations for patients in moderate circumstances than at most places farther south, as the access to the New York markets is so easy that good food is readily procurable. If the physician paid more attention to these places near at home, there would be less necessity for sending patients to Aiken, Mexico, Colorado, Florida, California, and so on.

The idea that a patient with phthisis cannot in the winter-time subsist well in a cold climate has been found to be a mistake in many instances. This is a point to which attention is now being drawn. There are many who get along very well in Colorado, as they used to do so in Minnesota, and as they do in the Adirondack region. A patient who does well in cold, dry weather at home can go to such a locality and breathe fresh air, can take exercise in the open air, and will inspire and expire more deeply than at home, and thus be much benefited.

There is one other important point spoken of by Dr. Wilson, and that is that, when a patient finds a climate which agrees with him, he should make his home there. I have had several cases illustrating the value of this advice.

That the inhalation of compressed air and the use of antiseptic inhalations do a great deal of good I am convinced from an experience of many years. There are frequently cases in which we are unable to put our finger on any particular spot of pulmonary dis-

ease, and yet we are certain that respiration is not being carried on as it should be. There are probably certain unused areas of respiratory surface. In such cases the advantage of compressed air is soon apparent. Air is admitted to the lungs with more than the ordinary force. A little more force than that of ordinary voluntary respiration is all that is necessary. If too much force is used, there will be over-distention, and thus more harm than good will be done. Under the increased pressure the air passes into the unused portions of lung, sanguification is rendered more perfect, appetite is increased, and nutrition is improved. Antiseptic inhalations are not required in such cases. In a later stage, where there are a few crepitant or subcrepitant *râles*, without marked dulness on percussion, compressed air is also of service. Not only does it use the unused portion, but it exercises the sound portion of the lung and helps to clear out those accumulated products which are present, thus proving a better expectorant than anything that could be put into the stomach. By taking an inhalation just before going to bed, many a patient is enabled to clear out his chest and thus pass a comfortable night without the necessity for anodynes. At this stage, or later, when the parts are more or less sodden from retention of these materials, and when more or less decomposition is taking place, terebene, eucalyptol, creasote, and the other antiseptics may be used with advantage. It is not going to do a great deal of good if you simply give temporary inhalations of ten or fifteen minutes' duration. The patient should wear one of these zinc respirators all night. Their sieve-like construction enables the patient to breathe without being oppressed as in some other forms of respirator. There are other ways of conducting continuous inhalation of balsamic substances. A plan that I have often adopted, particularly with clergymen and other students, is to direct that a vessel filled with water be kept constantly before the fire in the study or sitting-room, and that a piece of rosin be thrown into the vessel from time to time. Another plan is to have some young pines growing in pots in the sitting-room. In this way the effects produced by residence in piny regions may be imitated, sometimes sufficiently to be nearly as efficacious.

There is a good deal to be done in the same line without apparatus. Prolonged inspirations, five to ten at a time, through a tube passing through the window-frame into the open air, is often very beneficial, especially on awaking from sleep. This plan may be repeated several times during the day with great advantage. Air enters the lungs under respiratory pressure, acting as does compressed air released from an apparatus.

I recall at this moment a marked illustration of the benefits of compressed air. Some

twelve years ago, a gentleman was brought from a distant city who with difficulty walked with assistance from the car to my door. He was placed on inhalations of compressed air, and in two weeks was so much improved that he was able to return to his home with an apparatus, which he used systematically. That gentleman was probably further advanced in phthisis than any patient that I have seen apparently recover. He is still living. I have had other similar but less striking cases. The best results have ensued where the patient has procured an apparatus for his own use at home, so that the inhalations could be taken systematically several times a day for prolonged periods. This is far better than intermittent inhalations in the office of the physician. And it is for this reason that efforts to simplify and cheapen the apparatus for pneumatic treatment of pulmonary diseases, rather than to complicate it and increase the cost, will be of benefit to the profession and to the community.

Dr. J. M. Keating: This is a subject in which I am much interested as a physician, having sent patients to many parts of the world, to Egypt, Cuba, Florida, etc., having accompanied them on some occasions, and once as a patient myself, as a convalescent from severe illness. Although the attempt at scientific precision in the analysis and classification of climate is most laudable, there are other matters to be taken into consideration, not less important, to which little attention seems to be given.

In the first place, it seems to me that the proper climate for a consumptive is an *equable* one. By that I mean an absence of sudden changes of temperature. I would go so far as even to include in this marked differences between day and night. This statement being accepted, the mean average temperature of the climate we select, whether it is to be cold or warm, depends on the patient; that is, sex, previous occupation, tastes, character of the disease, and the stage of the disease. There are some people who cannot bear a cold climate: this is especially so with delicate women, aged people, and of course those with advanced disease. Then, again, we should choose a place where there is much sunshine and a soil capable of readily absorbing superfluous moisture, and consequently free from malaria. I believe that there is very little specific effect to be derived from atmosphere except from its purity, freedom from dampness, and possibly in some cases the balsamic vapors it contains. Good food and abundance of it is just as important as pure air. Elderly men and delicate women do far better in a warm climate, because they can live continuously in the open air. It is on this account that sea-voyages are so useful in such cases. But young men in the earlier stages of phthisis or with an obstinate bronchitis should be sent to a

section of country where they are obliged to live in the open air, but where a large amount of exercise is encouraged by a bracing atmosphere.

As I have said, it is necessary to know about the place to which we are sending our patients. You may say, "Go to Florida;" but there are more climates in Florida than in Pennsylvania. The patient may go to Jacksonville, and yet for pulmonary troubles this is certainly a treacherous place. There are here many very sudden changes, from intense heat to frost, severe storms, with cold and damp northeasters. St. Augustine is worse. Here, in addition to the above, there is a dust of coquina, or pulverized shells. The hotels are most comfortable; that is, for those who can afford to pay enormous prices. If your patient is not wealthy, he or she had far better stay at home. If you have decided that fresh air and sunshine are imperatively demanded, and the cold weather and sudden changes at home preclude any arrangements by which the said ends can be so supplied, and the patient is wealthy, there are many places near at hand to which he can go. There is Aiken, and Thomasville in Georgia, with delightful hotels, and many other places in the vicinity presenting the same characteristics. If your patient wishes to avoid any frost, you are safe in sending him to Enterprise, Florida; or, keeping away from the river and continuing down the spine of the peninsula, with the same sandy soil and pine forests we strike Altamonte, Winter Park, and Orlando, in Orange County, Florida.

I am satisfied that very ill cases with unfavorable prognoses should remain by all means at home. I have witnessed too many sad scenes, and have met with too many unfortunates who sought improvement and relief without the least prospect of amelioration, and who found nothing but expense, discomfort, bad food, exposure, and homesickness, to repay them for efforts which in the long run shortened their days. When you send very ill patients away, send them as near home as possible.

It is interesting to see that local treatment of pulmonary diseases is engaging so much attention, and from Dr. Cohen's paper we gain much information most useful to us as active practitioners. The largest number by far of our consumptives cannot get away: we have to treat them in our hospitals or in their homes. We have apparatus which can be readily used to inhale medicated air by the patient, and, with nutritious diet, equable temperature, pure air in abundance, and moderate exercise, we can accomplish a great deal for those who cannot afford the great expense of travel.

I believe that, so far as altitude is concerned in the treatment of phthisis, the tendency to overrate its importance is not so marked as in the past.

Dr. Edward T. Bruen: I have been much interested in both of the papers of this evening. The first paper touches upon a phase of the subject of the treatment of phthisis by climate which I have considered to a certain extent. My thoughts have been in the direction of obtaining some solid basis for advice to patients as to change of climates. The minor points to which reference has been made are to be considered; but I think that one of the main conditions that we are to look for in a climate is purity of air. The popular habit for many years has been to send patients to pine-regions, and these localities are known to furnish continuous supplies of ozone. With reference to purity of atmosphere as being a chief consideration, I may say that I have recently read a pamphlet by Schreiber, of Vienna, who gives the following facts: In Iceland,  $65^{\circ}$  north, where the coldest temperature reached is  $-28^{\circ}$ , and the highest  $+56^{\circ}$ , and the mean  $+40^{\circ}$ ; in Madras, in the torrid zone, in latitude  $13^{\circ}$  north, where the coldest temperature is  $+77^{\circ}$ , the hottest  $+88^{\circ}$ , and the mean  $+81^{\circ}$ ; and at a point in the temperate zone in latitude  $51^{\circ}$  north, where the coldest temperature is  $+3^{\circ}$ , the hottest  $+69^{\circ}$ , and the annual mean  $+35^{\circ}$ ,—in each of these localities there is freedom from consumption: the argument being that in each of these localities we have other conditions than the atmospheric influences operating.

It has been noticed that in high altitudes phthisis has increased when manufacturing establishments have been introduced. On the other hand, it has been found that the proportion of phthisis decreased in low meadow-lands where the inhabitants lived an out-of-door life. If pure air be a desideratum for this class of cases, we can obtain this pure air near at home. I have had reason to form a very favorable estimate of the value of Lakewood and the surrounding region. In some of the neighboring counties of Pennsylvania we can obtain this purity of air as well as in distant localities. Some fifteen years ago, McCormack, an English physician, wrote on the importance of rebreathed air as a factor in the development of phthisis, and advised that people sleep with open windows and with a free circulation of pure air in the chambers of those suffering under pulmonary diseases. We can thus see that this subject has for a considerable time occupied medical thought. With pure air we must have a maximum amount of sunshine, and a warm or cool climate, as is most agreeable to the constitutional peculiarities of individuals.

Although I have not used the methods of Dr. S. S. Cohen, I have always followed the principle involved, and have employed light gymnastics to stimulate the respiratory muscles and thus secure as perfect inflation of the chest as possible.

It goes without saying that in a wasting

disease such as phthisis the diet question is of great importance, and must be considered in connection with any climate.

In reference to the Colorado climate, while it possesses many advantages, I have learned by correspondence with patients that sudden and great changes in the thermometer often occur. In one case the temperature ranged in one day from zero, Fahrenheit, to plus seventy degrees. One other point: the water of a locality should receive considerable attention; and this is an objection to Colorado and New Mexico, where the water is largely limestone and not very pure. Dr. J. S. Cohen's mode of climatic selection seems very practical.

Dr. L. F. Flick: I have been much interested in the discussion of this evening, because at one time I was myself sent in search of a healthy climate. I think it is a question whether climate has as much to do with the benefit derived as the change of habits of life. My experience has been that the individual who takes plenty of out-door exercise improves, while he who expects to get benefit simply from the climate is doomed to disappointment.

In my own case I attribute my improvement to work in the open air with forced alimentation. I sometimes took as high as six to eight quarts of milk a day, and in sixteen months I gained fifty pounds.

I think that too much stress has been laid on climate. I think that in Pennsylvania we can get as much benefit as anywhere in the country. The Lehigh Valley and the Alleghany Mountains furnish as good climates as can be found anywhere. In certain places in these regions consumption is never heard of. A matter that has struck me forcibly is that where consumption is not heard of malarial troubles are likewise absent. By sending patients to these resorts near home they are saved much unnecessary expense.

A point which Dr. Bruen has called attention to in connection with certain climates spoken of by him applies equally well to the Western climates: namely, the great amount of dust. This holds good especially in regard to Colorado, New Mexico, and Arizona. Another point in reference to these climates is that, while the temperature may be equable, there are great variations between day and night. In such regions patients should not go out except while the sun is shining.

Dr. William M. Welch: I rise simply to ask Dr. Cohen if he has had any experience in the use of rarefied air. I have somewhere seen a description of an apparatus intended to contain rarefied air for therapeutical purposes. I recollect that Dr. Dennison, in his work on "Colorado as a Health-Resort," speaks very positively of the beneficial effects of that climate on asthmatics. The patient does not have to live in that climate any length of time before benefit is obtained, but



it comes at once. As one of the peculiarities of the climate of Colorado is great rarefaction of the atmosphere, it seems reasonable to suppose that rarefied air, artificially produced, should be of service in the paroxysms of asthma.

Dr. Neff: The instrument referred to is probably that which has been used in Brooklyn by Dr. H. F. Williams. The patient is surrounded with an apparatus in which the air can be condensed or rarefied. The process is termed pneumatic differentiation. I notice in reading the reports of cases treated in this way that hæmoptysis is not considered a contra-indication for this plan of treatment, and even in threatened hemorrhage this treatment has been used. In the neighborhood of a hundred cases have been reported as treated by this method, with very favorable results, by Dr. H. F. Williams,\* of Brooklyn, Dr. A. S. Houghton,† of Chicago, and Drs. De Wetteville and Seigel. Several of these cases were under the observation of the late Dr. Armor, of Brooklyn, and Dr. Alfred Loomis, of New York. It seems to me that the use of compressed air would be contra-indicated where there is any tendency to bleeding.

Dr. J. Solis Cohen: I would say, in reply to Dr. Welch's query, that I have had considerable experience with the use of rarefied air. It offers beyond question the best method of treatment in recent cases of asthma and in asthma in young persons. Expiration into rarefied air is better than inhalation, in most instances. Dr. Neff is correct in thinking that the breathing of compressed air increases the tendency to hemorrhage. The pressure on the blood-vessels is increased, and, if there is a tendency to bleeding, this favors it.

Dr. Frank Woodbury: The remarks of the lecturer and of Dr. Cohen with reference to the sending of invalids to health-resorts near at home struck me as being very pertinent. It is a matter to which the attention of physicians needs to be frequently called. A man 26 years of age came to consult me last summer with every evidence of rapid consumption and enormous fatty liver. He had been ordered to go to Colorado. I advised his father to send him to a place nearer home, where, if necessary, he could be reached in a short time, or from whence he could return in case he desired to do so. At my instance he was sent to Kane, in the northwestern part of Pennsylvania, where he improved greatly during the first two weeks, taking long walks and sleeping well. Unfortunately, he did not control his appetite, and he made blood so fast that his blood-vessels could not stand the increased tension, and one day he was taken with hemorrhage from the nose and kidneys, and died in less than forty-eight hours.

I wish to take this opportunity of again mentioning Kane as among our available mountain health-resorts for consumptives. It is known by reputation to many physicians of this city, from the fact that some of our prominent physicians have been in the habit for years of sending patients there; but it is not so well known as it deserves to be. After personal investigation, I pronounce it better adapted for such cases than many more fashionable resorts, and the expenses are much less than at the latter.

There is one element which has not been referred to in the discussion, and that is that the patient is liable to be affected by homesickness. We know that a man in ordinary health may die with homesickness. If it is so depressing to a man in health, who has so many resources, how much more is it likely to be so in a sick person who is removed from his customary surroundings! This is another point in favor of health-resorts that are easily accessible, such as those mentioned by those who have preceded me in this discussion.

I should like to make a few remarks in regard to consumption, which, however, may sound a little heretical. This disease has been the subject of medical investigation for thousands of years, and in that time I think that we have reached some valid conclusions, based upon clinical and pathological studies, as to the best methods of treatment. These advances are not dependent upon, nor have they been disturbed by, recent progress in bacteriology, and they will remain the property of the profession after much of the recent interest in bacteriology has subsided.

I would particularly like to direct your attention to the fact that the value of climatic treatment was established before the present idea of contagion or particulate infection was thought of. Dr. Joseph Parrish, of Philadelphia, satisfactorily established the truth of this in his own practice and in his own person.‡ Permit me to state very briefly that, to my mind, consumption, as we use the term clinically, need not be a specific disease at all. On the contrary, there are cases in which it appears to be essentially a form of systemic degeneration or decay, a process of necrobiosis, and, in a broad sense, where it may be taken as an expression of a want of harmony between the human organism and its environment. It is the resultant of a large number of factors which cannot be considered at the present time, prominent among which are those which depress the vitality and which conspire to form the peculiar susceptibility or vulnerability which is universally acknowledged to exist. It has been well said by Dr. Keating, there are some patients who are in-

\* New York Medical Journal, October 3, and Medical Record, January 17.

† Journal of the American Medical Association.

‡ The reader is referred to the Proceedings of this Society of March 22, 1882, for more extended consideration of this subject, in a discussion on the "Rational Treatment of Consumption."

capable of surviving in a cold climate. To such individuals the climatic treatment is just as applicable as taking a drowning person out of water and putting him on the land. Although man may live in all climates, yet all climates are not equally habitable by all men. Speaking broadly, each is adapted individually to inhabit a particular climate; a climate which is suitable for one class is unfit for another class: when the conditions are so unfavorable that acclimatization is impossible, the individual must die, and the mode of death in the majority of cases would, in all probability, be by consumption. As may be inferred from what I have said, I do not consider consumption as merely a disease of the lungs. In a large proportion of cases it is a disease of the whole organism, just as one form of Bright's disease is an affection of the entire system. The presence of a parasitic micro-organism in the lungs would in such cases constitute an incidental element, which, however, demands our consideration, since it may possibly influence both our therapeutics and our prognosis.

Dr. S. Solis-Cohen: I have but a few words to say in closing the discussion. Before adverting to the remarks upon my own paper, permit me to express my appreciation of the masterly essay of Dr. Wilson. I think he has very clearly shown what may be expected from change of climate, and what considerations should govern us in sending patients from home. The object of the plans of treatment which I have brought forward this evening is not to keep everybody at home, but simply to relieve those who either cannot get away at all, or can go away only for a very short time during the most unfavorable season at home. I have been much impressed by my experience with the benefit of out-door life, even in Philadelphia, and I insist upon patients going out to the Park or elsewhere, whenever the weather permits.

Dr. Neff has alluded to what is called "pneumatic differentiation." This is a new name for an old measure practised for a number of years. There is nothing new in the principle, though there may be in the mechanism of the particular appliance to which he refers. As our object, however, is to extend the benefits of pneumato-therapy to those who cannot afford to go away from home, I am not inclined to view with favor anything so preposterously exclusive and expensive as is that apparatus at present. Hauke, the first to construct a portable apparatus for compressed air, has devised a sort of pneumatic cuirass, by which the air about the thorax may be rarefied, the patient breathing either ordinary air, compressed air, or any desired gas or vapor. This is a cheaper and, I should think, equally efficacious means of accomplishing the same result. I did not allude to inhalations of rarefied air in the paper, because I referred to

nothing but consumption. I can confirm the statement that rarefied air is of decided advantage in asthma. I did allude, however, in the paper to expiration into rarefied air. While a patient inspires compressed air from one apparatus, he may, by a little arrangement in the stop-cock, expire into rarefied air in another apparatus. This was advised by Waldenburg more than ten years ago. You can call it "pneumatic differentiation" if you choose.

In reference to the question of hemorrhage from breathing compressed air, it may savor of temerity to differ from him to whom I owe my knowledge of these subjects, but I have had two cases which do not support the proposition. One of these cases is that of a woman referred to me by one of the gentlemen present this evening. She is of exceedingly bad family history, two brothers and a sister having died in hemorrhage. She had had several attacks of hæmoptysis, and was much depressed in body and mind. She was put on the use of compressed air, and had no further hemorrhage until six months after the treatment was stopped. She then had two hemorrhages, and the treatment was renewed for a short time. Since then there has been no further bleeding. Her spirits are excellent, the pulmonary signs are stationary, and she has gained thirty pounds in about eighteen months. The other case is that of a man now under treatment for advanced phthisis. He had one or two hemorrhages prior to treatment by compressed air. Since its institution, some six months ago, he has greatly increased in flesh and strength, is able to attend to his business, and has had no further hemorrhage. I do not say it has prevented hemorrhage; but in these predisposed cases it certainly has not occasioned any loss of blood.

#### NEW YORK PATHOLOGICAL SOCIETY.

THE annual meeting was held January 13, 1886, the President, JOHN A. WYETH, M.D., in the chair.

#### REPORT OF THE COMMITTEE ON MICROSCOPY.

Dr. WALDSTEIN, of the Committee on Microscopy, said that the specimen presented at a recent stated meeting by the President was a tuberculous testicle; the other specimens presented by the President, being small tumors removed from the antitragus, were cartilaginous.

#### PERIOSTEAL SARCOMA OF THE RIGHT FEMUR.

Dr. A. G. GERSTER presented a portion of the right femur, the seat of a large periosteal sarcoma, removed by amputation from a girl 26 years of age. The patient had fallen down-stairs, but suffered no serious injury. From that time, however, she began to have difficulty in bending the knee and in going

up-stairs. A tumor formed over the outer condyle of the right femur, which Dr. Gerster believed to be a sarcoma. At one point there was some movement in the tumor which led Dr. Fluhrer to suspect enlarged popliteal glands, and Dr. Markoe thought it was probably an osseous growth with a narrow pedicle and mushroom-shaped top. Amputation proved it to be a periosteal sarcoma limited to the diaphysis.

#### MYXO-SARCOMA OF THE TESTICLE.

Dr. GERSTER presented a myxo-sarcoma of the testicle, the size of his fist, removed from a patient 32 years of age. The cause was obscure, as there was no history of injury or inflammatory condition to account for it.

#### OPERATION FOR PARTIALLY-DESCENDED TESTICLE, FIBROMA, AND HERNIA.

Dr. GERSTER presented specimens removed from a man 30 years old, who since early boyhood had noticed only one testicle in the scrotum. When he was about eighteen years old a hernia appeared on that side; and, inasmuch as the patient could not wear a truss, on account of the pain which it produced, the hernia developed into rather large proportions. Within the past five years the patient noticed a body descend alongside the hernia, which probably was the atrophied testicle. Being unable to attend to his business, which required him to stand, he consulted Dr. Gerster, who found an incompletely-descended testicle and a hernia. There was a considerable portion of omentum which could not be completely reduced. At the operation, a body was found external to the sac, which proved to be fibrous tissue, the result of an inflammatory process. The sac was opened, the omentum, which was extensively adherent to the sac and inguinal canal, was easily dissected up, deligated in several pieces, cut off, and the stump replaced in the abdominal cavity. The sac was transfixed at its neck with a catgut suture, which could be compared to the string of a purse drawn tight. The sac was then cut off and the stump placed in the inguinal canal. The pillars of the external ring were brought together, leaving a little slit for the spermatic cord. The atrophied testicle was removed. The patient did well, and was afterwards dismissed from the hospital with the advice to wear a truss. Dr. Gerster thought a radical cure of a hernia of this size was doubtful, and with regard to so-called radical cure of hernia by injections, he did not believe it took place. Benefit, however, might result if the patient were enabled to wear a truss.

The PRESIDENT said, regarding the radical cure of hernia, that he had operated in about twenty cases, and he was certain of a cure in only one case in which he did Heaton's operation. He always advised the use of a truss subsequent to the operation.

#### RETENTION-CYST OF THE SUBMAXILLARY GLAND.

Dr. GERSTER presented a mucous cyst removed from the floor of the mouth of a man 26 years of age. It had been diagnosticated as a ranula, and an incision made into it through the oral cavity, by another physician, but the sac refilled, forming a tumor which seriously interfered with deglutition, and even with respiration. After extirpation, which was done in October last, the tumor was found to be a retention-cyst of the submaxillary gland. It had developed towards the median line, producing the impression that it might be a dermoid cyst. The facial and lingual arteries had to be deligated during the operation.

#### FIBROMA OF THE RIGHT VOCAL CORD REMOVED BY MACKENZIE'S FORCEPS.

Dr. C. H. KNIGHT presented a specimen which was removed from a man 47 years of age, who two years ago began to have trouble in speech and from coughing. During the operation hydrate of cocaine was employed. Six days after the operation the voice was natural.

#### CONGENITAL ABSENCE OF THE LEFT KIDNEY.

Dr. T. MITCHELL PRUDDEN presented the somewhat enlarged right kidney removed from the body of a man 22 years of age, who had given no symptoms of renal disease, and who had died with pulmonary phthisis and tubercular meningitis. The left kidney and ureter were absent, there being not even a rudiment of those parts. The specimen was worthy of presentation, as it was desirable to have exact statistical knowledge with regard to this malformation, as bearing upon nephrectomy. According to Gootmann, within twenty-five years previous to 1883 there had been but seventy cases of solitary kidney put on record.

Dr. W. M. CARPENTER saw, two or three years ago, at least three cases of absence of one kidney at autopsies made at Bellevue Hospital. He had seen no case before nor since. Dr. Welch found but one kidney in the body of a late New York surgeon.

Dr. W. P. NORTHRUP said that of a thousand autopsies on children he had found two thousand kidneys.

Dr. GERSTER had, in operating on a baby for imperforate anus, mistaken an enlarged ureter for the intestine, punctured it, and at the autopsy found it belonged to an only kidney.

#### SUPERNUMERARY MAMMARY GLAND.

Dr. A. JACOBI presented, in behalf of a candidate, a specimen removed from the left axilla of a woman 27 years of age. She first noticed a tumor about the fifth month of her third pregnancy. There also appeared a small tumor in the left breast, and, inasmuch as a near relative had died of cancer, she

feared that the disease was malignant. Dr. Jacobi, who saw the patient, diagnosticated a supernumerary gland in the axilla, notwithstanding the absence of a nipple. The tumor in the axilla was removed, and was found to be a chain of milk-secreting glands with no external duct or connection with the mamma of that side. After its removal the small tumor in the left mamma disappeared.

Dr. GERSTER thought that supernumerary mammae in the vicinity of the axilla were more common than was generally believed, particularly in well-nourished women. They usually had an excretory duct leading to the mamma, but apparently they constituted a separate gland. A fact of some importance was that these axillary bodies sometimes became carcinomatous, the malignant process affecting the adjacent structure of the mamma proper secondarily. He mentioned such a case in which Dr. Waldstein made the microscopical examination for him.

Dr. JACOBI said that the remarks of Dr. Gerster made the candidate's case still more interesting. First, the woman was thin; secondly, she had not a very large mamma; thirdly, she had not noticed anything during her first two pregnancies, and it was only during the third that the tumor appeared.

Dr. WALDSTEIN remarked that, as Dr. Gerster had said, supernumerary mammae were not very rare, but they nearly always had a nipple of their own, while in the case of the candidate there was none. He would also take the liberty of adding that during his examination of the specimen he found the axillary glands tumefied and containing cholesterolin, showing that the milk secreted by the gland without a natural outlet was being cast out through the lymphatics.

#### GENERAL TUBERCULOSIS.

Dr. L. EMMET HOLT presented the lungs of a child, 4 months old, which died after a few days' illness, having tubercles in various organs of the body and slight pneumonic consolidation. The specimens were chiefly interesting in connection with the symptoms.

#### DIPHTHERITIC CROUP.

Dr. W. P. NORTHRUP presented a portion of lung from a child, showing the wide distribution of the membrane in membranous croup or diphtheritic croup. In the specimen presented the exudate occupied not alone the larger bronchi, but extended to within half an inch at most of the base of the lung. On looking over the records of the Foundling Asylum, in which this case occurred, he found the extent of distribution of the membrane given in sixty-one fatal cases of laryngeal diphtheritis or membranous croup: extending from the pharynx to the finest bronchi, twenty-two cases; from the pharynx to the bifurcation of the trachea, nine cases; from the larynx to the first division of the bronchi,

twenty-one cases; from the larynx to the second division of the bronchi, four cases; to the fourth division, three cases; over the pharynx and trachea, two cases. In forty-nine cases croup was the first symptom; in twelve cases membrane in the pharynx was the first indication. Pneumonia occurred in forty-four cases.

Dr. Northrup also presented Dr. O'Dwyre's tube, used in the asylum for the relief of dyspnoea. Dr. O'Dwyre had spent five or six years in perfecting the tube, and it could now be used in private practice, although a little skill was required in introducing it through the glottis. It never failed to relieve dyspnoea in cases of croup. In the asylum they were accustomed to remove the tube once in about twenty-four hours, but the symptoms usually called for its replacement in a short time. A little of the milk given for nourishment would enter the tube, and after the act of coughing to expel it the child could breathe more freely and would go to sleep. Should the tube become clogged, severe coughing would cause it to be expelled. There had been only a slight loss of epithelium at the point where the end of the tube impinged upon the trachea; the vocal cords had not been affected.

At the executive session the following officers were elected: John A. Wyeth, M.D., President; T. Mitchell Prudden, M.D., Vice-President; Wesley M. Carpenter, M.D., Secretary; John H. Hinton, M.D., Treasurer; John C. Peters, M.D., Editor; Frank Ferguson, M.D., Assistant Editor; John C. Peters, M.D., T. M. Prudden, M.D., L. Emmet Holt, M.D., W. P. Northrup, M.D., and Louis Waldstein, M.D., Committee on Ethics; H. Marion Sims, M.D., and E. C. Wendt, M.D., Members of Committee on Publication.

#### NEW YORK ACADEMY OF MEDICINE.

A STATED meeting was held January 21, 1886, the President, A. JACOBI, M.D., in the chair.

#### REFLEX SYMPTOMS IN NASAL AFFECTIONS.

Dr. E. GRUENING opened the discussion on this subject with a paper on reflex ocular symptoms in nasal affections. The basis of his remarks was clinical observation. When we touch the nasal mucous membrane with the probe, reflex ocular symptoms will follow, such as lachrymation, conjunctival hyperæmia, photophobia, and sneezing; and nasal symptoms may be evoked in some persons by exposure of the eyes to a bright light. In a number of patients he found ocular symptoms, such as lachrymation, sensitiveness to ordinary light, and redness of the eyes, when examination of the eyes revealed no lesion which would account for the existence of such symptoms. For such cases collyria, hot and cold applications, etc., have been tried, but without benefit, whereas treatment directed



to the mucous membrane of the nose resulted in immediate relief of the ocular trouble. Dr. Gruening related the histories of a number of cases of ocular symptoms cured by treating the Schneiderian membrane. The cases did not include eye-symptoms which could be traced to extension of the nasal disease up the lachrymal duct. The treatment directed to the nose would depend upon the nature of the affection. Of course, all cases of ocular trouble would not yield to measures directed against an abnormal condition of the Schneiderian membrane, but he had a series of one hundred and fifty cases which justified him in drawing the conclusion that there existed a relation between the nasal and the ocular affection. Common features of the cases were burning and smarting sensation in the eyes, inability to fix vision, increased vascularity of the conjunctiva, absence of important lesion of the eyes and their appendages, and the inefficacy of treatment directed to the eyes, while the condition was relieved by measures adopted for the cure of the nasal disease.

Dr. T. A. McBRIDE read a short paper in which he gave the histories of five cases of migraine and other neuroses which were relieved by treatment directed to the nose. He himself had not pronounced upon the nasal affection, but the cases had undergone treatment at his hands for the reflex symptoms, and, not being cured, the patients were seen by rhinologists who treated the nasal affection with the result of curing the migraine, supra-orbital neuralgia, gastric disturbances, etc.

Dr. BEVERLY ROBINSON read a paper limited chiefly to the connection between nasal disease and hay-fever, so called, and asthma. There were various other reflex disturbances occurring in connection with nasal symptoms of which he made mention. Regarding hay-fever and its connection with nasal disease, the results of operations for the nasal disease by Daily, of Pittsburg, and Mackenzie, of Baltimore, and many other rhinologists who had followed in their footsteps, offered abundant proof of such connection. While in many cases symptoms not directly connected with the nasal passages might disappear on instituting treatment for nasal disease, yet such cases did not occur sufficiently often to justify us in employing prolonged nasal treatment with the hope of curing secondary or reflex conditions. There must be an individual susceptibility before nasal disease would produce a reflex neurosis. First search should be made for other possible causes of the reflex phenomena, and, failing, we would then be justified in turning our attention to the nasal passages. This, however, did not mean that recognizable nasal disease should be allowed to go untreated. With regard to the question whether the sensitive area of the nasal mucous membrane was very limited or widely distributed, the speaker was inclined

to take a middle view. He thought the continued use of cocaine spray would result in increased rather than diminished congestion of the mucous membrane. Dr. Robinson devoted a few remarks to treatment, and said that among palliative measures carbolic acid was a favorite remedy with him. But there were cases in which time spent in using palliative measures would be worse than thrown away, and we should proceed at once to use the galvano-cautery, etc.

Dr. Goodwillie continued the discussion, presenting some models of cases in which there had been deviation of the septum, exostosis, etc., causing various reflex symptoms. He also presented some instruments for operating upon the diseased nose.

The paper was further discussed by Drs. Baruch, Schweig, and the President.

The President had, during the course of a number of years, observed hundreds of cases of local choreic movements in children, such as blinking of the eyes, twisting the corners of the mouth, shrugging one or both shoulders (called bad habits), associated with chronic or subacute pharyngeal or nasal catarrh, or with conjunctivitis. Many such cases terminated in general chorea. Very often the rhinitis or pharyngitis began in the pharyngeal tonsil, a fact to which little attention had been called. He had always found chronic rhinitis associated with pharyngitis, or chronic pharyngitis associated with rhinitis. But it was not always necessary to treat the entire inflamed membrane: often treatment applied to a part would result in a cure of the general pharyngitis and rhinitis. Troutmann had very recently reported one hundred and fifty cases of enlarged pharyngeal tonsil, eighty-seven of which were complicated by hemicrania. Of the eighty-seven, all but two were cured by destroying in part or completely the enlarged pharyngeal tonsil. In one of the two not so cured there was a nasal polypus. It would seem that disease of any portion of the naso-pharyngeal cavity might give rise to the reflex symptoms alluded to during the discussion.

## REVIEWS AND BOOK NOTICES.

THE PRINCIPLES AND PRACTICE OF MEDICINE. By the late CHARLES HILTON FAGGE, M.D., F.R.C.P., etc. Including a section on Cutaneous Diseases, by P. H. PYE SMITH, M.D., etc., Chapters on Cardiac Diseases, by SAMUEL WILKS, M.D., and Complete Indexes by ROBERT EDMUND CARRINGTON, M.D., etc. Volume I. Philadelphia, P. Blakiston, Son & Co., 1886. 8vo, cloth, pp. 1040.

During the last twelve years of his valuable life Dr. Fagge was constantly occupied in preparing a Treatise on the Practice of Med-

icine, in which he intended to collect the rich results of his many investigations and large experience, basing it to a great extent upon his laborious researches into the pathological and clinical records of Guy's Hospital during the twenty years in which he was connected with this great metropolitan hospital as registrar, pathologist, and physician. Endowed by nature with wonderful powers of memory, he was familiar with modern medical literature, while his work in the wards and dead-house afforded him almost unequalled opportunities of obtaining extensive experience, which his numerous contributions to medical literature showed that he diligently improved. The results of this work appear in the *System of Medicine* to which he gave so much thought and labor. The first volume contains an Introductory Chapter defining disease, and discussing Symptomatology, Etiology, and Prognosis. This is followed by a section on General Morbid Processes, Contagion, Fever, Inflammation, Tubercle, Tumors, and Syphilis. Specific Diseases occupy the next section, followed by Diseases of the Nervous System, and Neuroses, while a section of Diseases of the Respiratory System concludes the work.

The style is lucid, interesting, occasionally familiar, even discursive, and the book, on the whole, is not only highly readable, but is a rich mine of experience. The judicious editing of Dr. Pye Smith has greatly enhanced its value.

**LECTURES ON THE DISEASES OF THE NOSE AND THROAT.** Delivered during the Spring Session of Jefferson Medical College. By CHARLES E. SAJOUS, M.D., etc. Illustrated with one hundred chromo-lithographs from oil-paintings by the author, and ninety-three engravings on wood. Philadelphia, F. A. Davis, attorney, publisher, 1885. 8vo, cloth, pp. 439.

This handsomely-printed and freely-illustrated work is one upon a subject in which the general practitioner is directly interested, since the habits of life of modern civilization make disorders of the upper air-passages among the most common ailments.

The technique of laryngoscopy and rhinoscopy is considered, with the instruments used for cleansing and medicating the throat and nasal cavities, and the several diseases of these portions of the body are considered, with the therapeutic applications. It is no small advantage that the plain, concise, though explanatory, language employed in lecturing before students has been preserved, and abstruse pathological discussions avoided. An exception, however, to this is made in favor of hay-fever, for which the author has suggested a new title, "Periodical Hyperæsthetic Rhinitis," which corresponds with recent ideas concerning the pathological process involved, and to a certain extent suggests its rational treatment. The treatment of various

disorders receives a large share of attention, and the advice is judicious and based upon extended experience. The industry of the author is exemplified in the numerous drawings and oil-paintings from nature, which are reproduced by chromo-lithography and add decidedly to the usefulness and attractiveness of the book.

## NEW REMEDIES AND CLINICAL NOTES.

**THE TREATMENT OF PNEUMONIA BY QUININE.**—F. P. Atkinson, M.D., says (*Practitioner*) that, "if the Collective Investigation Committee of the British Medical Association have done no other good, they have certainly directed attention to the treatment of pneumonia by quinine, which is destined, I think, sooner or later, to supersede all methods now in vogue. There can be no question that in almost every case (and I think there are very few exceptions) it prevents the disease advancing beyond the first stage, and rapidly causes resolution to take place. It does away with the necessity for poulticing, all that is required being the application of cotton-wool to the front and back of the chest. My friend Mr. Corbett, who has a good series of charts to bring forward, tells me it is equally successful in cases arising in young infants as it is in adult cases, and he asserts that many children he has been able to pull through would, in old times, certainly have been lost. He gives an adult two grains every two, three, or four hours, according to the case, combined with hydrobromic acid, and, if there is any delirium, a few drops of tincture of digitalis. If there is any large deposit of urates in the water, he gives some citrate of potassium alternately with the quinine. This method of treatment I have followed out with decided benefit to my patients and satisfaction to myself.

"Now, any one who has given repeated doses of quinine to a patient will, no doubt, have noticed the profuse sweating that occurs after its administration; and I am anxious to find out as to whether quinine really acts curatively through the perspiration it produces, or its antiseptic action, or both? In some cases of menorrhagia it exerts a very decided influence upon the muscular tissue of the uterus: has it any influence upon the muscular coat of the arteries in pneumonia? An answer to these questions would, no doubt, help us not only in the treatment of pneumonia, but also many other febrile diseases."

**MERCURIAL INUNCTIONS IN PNEUMONIA.**—In the *Voëna-Sanitarnoë Delo*, No. 26, 1885, p. 285, Dr. S. Sher, of Proskurov, Podolsk government, writes that the treatment of croupous pneumonia by local applications of

cold and by rubbing in gray mercurial ointment (two drachms daily) seems to be very effective, since it apparently relieves the symptoms and shortens the course of the disease, the average duration of the latter (from rigor to defervescence) being only five days. Of seventeen cases treated after this method, only one ended fatally. In five of the cases both of the lungs were affected.—*London Medical Record*.

**THE PREVENTION OF HYDROPHOBIA.**—The *Indian Medical Gazette*, in commenting critically upon Pasteur's experiments, declares that the cases which had been communicated "are inconclusive in a high degree. Take Meister's, on which most stress is laid. It is not at all certain that the bite was effective, or that hydrophobia may not still occur. Altogether, these experiments, however interesting and sensational, are by no means devoid of serious fallacies, and, for the present, the prevention of hydrophobia must be essayed on other lines."

**THE COMBINED EFFECTS OF MORPHINE AND PARALDEHYDE.**—Morphine increases the effects of paraldehyde, as it does those of chloroform and chloral. It not only prolongs the sleep induced by efficient doses of paraldehyde, but renders small inefficient doses active. Thus the author found that one centigramme of hydrochlorate of morphine and one gramme and a half of paraldehyde, when given separately to a rabbit weighing about two kilogrammes, produced no hypnotic effect; but the same quantities given together caused deep sleep, lasting for several hours. Unlike chloral and other hypnotics, paraldehyde has no harmful secondary action. The simultaneous action of morphine and paraldehyde was found by the authors, in a careful series of experiments, to increase the frequency of the heart; the arterial blood-pressure is maintained, respiration being less frequent than in normal sleep. They recommend the mixture as a powerful hypnotic, not depressing the functions of respiration and circulation, but acting rather as a heart-tonic. The mixture, too, has the advantage of being a union of a hypnotic and an analgesic, and thus is indicated in many pathological conditions in which neither paraldehyde nor morphine can be given alone.—*Annali di Chimica Medico-Farmaceutica*, August, 1885: *London Medical Record*.

**AROMATIC SULPHURIC ACID.**—The addition of cinnamon to an alcoholic dilution of sulphuric acid was probably practised originally in order to increase its astringency; but it has been found that in the presence of sulphuric acid and oxygen this astringency is rendered inert. Catechu, on the contrary, is free from this objection, and has, according to R. Rother, the property of preventing such

change over similar agents liable to these objectionable alterations, and he advises its addition to the official formula. The addition of cardamom he also recommends as a grateful and efficient aromatic, the short variety being the best. The following is the formula which he advocates:

R Pulv. cinnamon (Saigon), 2 troy oz.;  
Catechu (air-dried),  $\frac{1}{2}$  troy oz.;  
Cardamom, short,  $\frac{1}{4}$  troy oz.;  
Sulphuric acid, 6 troy oz.;  
Alcohol and water, aa q. s. ad 2 pints.

"Bruise the cardamom, and separate the seeds from the capsules by means of a sieve. Then powder the seeds finely, and mix them with the cinnamon and eight fluidounces of alcohol. Macerate the mixture for two days, with occasional shaking; then filter, and follow with alcohol through the filter until eight fluidounces of filtrate are obtained. Reduce the catechu to a coarse powder, add eight fluidounces of water, and apply heat until the soluble portion is extracted, and set the solution aside for several hours. When this solution has thoroughly cooled and the catechu has crystallized out, pour the mixture into a filter and follow with water, if necessary, until six fluidounces of filtrate is obtained. Mix the sulphuric acid with one pint of alcohol by gradual addition and constant stirring, taking care to modify the temperature by appropriate means of refrigeration. To this mixture, when cooled, add the aromatic tincture, followed by the catechu solution; then set it aside for several days, and filter.—*Druggists Circular and Chem. Gazette*.

## MISCELLANY.

DR. PIFFARD has retired from his editorial connection with the *Journal of Cutaneous and Venereal Diseases*. The *Journal* will be continued under the sole editorial charge of Dr. P. A. Morrow. We may remind our readers that this is the only publication in the English language devoted to skin and venereal diseases, and during the three years of its existence it has won for itself a high reputation for scientific excellence as well as practical utility. In addition to presenting all that is new and valuable in these special departments, the colored lithographs and wood-engravings with which the original articles are illustrated are worth more than the price of subscription.

**LIGATURE OF THE FEMORAL ARTERY UNDER COCAINE.**—Dr. Joseph W. Howe ligatured the femoral artery for popliteal aneurism, under cocaine, at St. Francis' Hospital, New York, January 27.—*The Medical Record*.

DR. DU CLAUX has been appointed to the

chair of Biological Chemistry in the Faculté des Sciences.

DR. VULPIAN has resigned his position as physician in the Paris hospitals.

HARVARD MEDICAL DEPARTMENT.—Dr. W. L. Richardson has been appointed professor of obstetrics.

PERSONAL.—Dr. H. Earnest Goodman has removed to No. 1509 Walnut Street, Philadelphia.

## NOTES AND QUERIES.

### GRATUITOUS MEDICAL SERVICE FOR THE INDIGENT INSANE.

In this age of progress and enlightened civilization it is a reassuring guarantee of real advancement to observe the growing tendency on the part of the more intelligent, powerful, and highly-favored classes of the community to extend the assisting hand to those less intelligent and less fortunate, whose daily hand-to-mouth struggle for subsistence is sufficiently precarious and uncertain even when bodily and mental vigor is retained. The invasions of disease, to which depressing social conditions and unsanitary surroundings render them peculiarly liable, rapidly recruit the numbers of those depending upon charity. While provision for the care and medical treatment of the indigent sick has been liberally made by the establishment of general hospitals and of free medical dispensaries for physical maladies and disorders, until very recently no effort has been made to provide gratuitous advice and medical treatment for the indigent insane. The Board of Managers of the Pennsylvania Hospital have come forward and supplied this deficiency by the establishment of such gratuitous service in the Out-Patient Department of the general hospital. It is designed to reach more particularly cases of mental disorder in their incipency whose condition does not demand custodial care. In regard to this branch of the hospital service it is sufficient here to say that during the past few months since its commencement the applications for advice and treatment from proper cases have been sufficiently numerous to forecast a career of future usefulness.

The question will naturally arise, Does a demand really exist? Is there any considerable number of cases of incipient or of threatened insanity among the poor of our community? This will be best answered from the future experience of the service already established, as it will serve to test the requirements of the public in this matter. It would seem as though the demand was most pressing, when viewed in the light of the great and ever-increasing number of requisitions for admission made upon our already overcrowded public asylums for the insane by this very class. Nor are these demands made solely upon State hospitals: the charitable capabilities of our private institutions are strained to the utmost limit in response to almost daily applications for admission of acute cases of mental disorder among the poor. Let it be granted that the large majority of these have passed the stage during which it would be possible to benefit them by dispensary treatment; that they already require custodial care. Yet the time was when their disorder was incipient, threatening, impending; and the fresh recruits to this army of unfortunates must be constantly coming in.

The offer of gratuitous relief of incipient insanity takes a long step in advance of the benefits extended by our hospitals in the past, meets the patient at a remote point upon his way to the institution with some reasonable hope of averting the impending danger and restoring him to a condition of health and usefulness. Too frequently their improvable period has passed by neglected, or their chance for speedy recovery has been much impaired prior to the time of hospital commitment, due in part to the absence of facilities for advice and treatment, to a failure to recognize the character of the disorder, or to a natural and popular prejudice against fixing the supposed "stigma" of insanity upon the patient by placing him in a hospital. These untoward influences would be much less likely to operate in a dispensary service, especially should the latter be connected with a general hospital and not (apparently) with an asylum. The insane will come, or their friends will bring them, to a department where the subjects for treatment in general medicine, surgery, gynecology, ophthalmology, and mental disorders are treated gratuitously in the same or in contiguous apartments, with much less dread and hesitation than they would exhibit if

invited to present themselves for treatment at an asylum. In offering such service with the hope of actually reaching this class and alleviating their morbid conditions, it is necessary to meet them upon their own ground and make proper concession to popular prejudice.

A properly-conducted free service might do much in the course of time, by preventive medical treatment, to diminish the great pressure of applications for admission upon our public institutions. Here in this district, noted for philanthropy, the public room for the care of the insane poor is inhumanly overcrowded; nor will extensions of present existing buildings suffice to abate this evil. It demands, in addition to this, a new hospital, furnished with the best modern appliances for the fulfilment of its purposes, in order to begin to meet the actual requirements of the case. Even were this accomplished, in a very few years the accommodations provided would again be found insufficient. Is it not time, then, to at least attempt to apply prophylactic therapeutics and hygiene to impending insanities? It is the "ounce of prevention" which, in this instance, is worth more than any weight of alleged "cure." This service would afford an interesting study of the effect of treatment of these partially-developed pathological conditions. As the records were extended, a quite new field of clinical facts would be at the disposal of those who comparatively seldom have an opportunity of treating a case of incipient insanity, although in daily contact with its later and less hopeful manifestations.

It might not be out of place here to indicate some of the forms of mental disorder likely to present for advice at such service. Prominently first in point of frequency would be those showing that group of symptoms which picture to the mind impending melancholia. The ambitious, feverish struggle for precedence which seems to pervade all classes of the community, the absence of proper thrift, the living fully up to or beyond one's means, however small they may be, and the disappointment and embarrassment which are almost invariable accompaniments of such a mode of life, are responsible for much of the over-anxiety and mental depression found in the middle and lower classes. Grief, shame, disappointed ambition, pecuniary reverses, domestic infelicity, and the depressing effect of hard toil for a scant subsistence are some of the many exciting causes. Melancholia seems to be, at present, the most prevalent type of acute insanity. That worn-out and broken-down condition which has received the name neurasthenia would also be frequently encountered, as would insomnia in its many forms, occurring as an isolated morbid condition or as a troublesome symptom of other and graver affections. Less frequently would be met cases of mania, more or less advanced, chronic insanities, syphilis of the brain, parietic dementia, epilepsy, mental disorders of traumatic origin, those dependent upon vascular defects, upon the abuse of stimulants, the habitual use of drugs, and those the result of imperfect or arrested development.

The knowledge of the existence of such a charity should be widely diffused in order to reach those for whose relief it was founded, and the medical fraternity of our city could doubtless render valuable assistance in the cause, not alone by the general diffusion of information and the recommendation of special cases, but in the equally important task of educating the public mind to a higher level of appreciation of its duties and responsibilities towards its insane.

Should it be found in the future that free service for these disorders declined through lack of patronage, it would not indicate that insanity is not prevalent, nor that mental diseases have not distinctly recognizable initial stages, but that popular education and enlightenment would have to advance a step higher in order to appreciate the public-spirited efforts in its behalf of those who builded ahead of their time.

HENRY M. WETHERILL, JR., M.D.,  
*Pennsylvania Hospital for the Insane.*

## OFFICIAL LIST

### OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U. S. ARMY FROM JANUARY 17, 1886, TO JANUARY 30, 1886.

COLONEL JOHN E. SUMMERS, SURGEON.—Retired from active service, by operation of law, January 24, 1886. S. O. 20, A. G. O., January 25, 1886.

MAJOR WARREN WEBSTER, SURGEON.—Sick-leave of absence further extended nine months on account of sickness. S. O. 15, A. G. O., January 19, 1886.

MAJOR WILLIAM E. WATERS, SURGEON.—Granted leave of absence for one month and fifteen days. S. O. 5, Division of the Atlantic, January 23, 1886.

ASSISTANT-SURGEON J. M. BANISTER.—Ordered for temporary duty at Fort Warren, Massachusetts. S. O. 16, Department of the East, January 23, 1886.